

STIC-Biotech/ChemLib

138189

mej

From: Chernyshev, Olga
Sent: Thursday, November 18, 2004 8:58 AM
To: STIC-Biotech/ChemLib
Subject: 09/899,815, sequence search request

Please search SEQ ID NO: 1 in regular and pending databases.

Thank you very much!

Olga N. Chernyshev, Ph.D.
AU 1646
4D84
2-0870
mail 4C70

RECEIVED
NOV 18 2004
TECH/CHM. DIVISION
(STIC)

STAFF USE ONLY

Searcher: _____
Searcher Phone: 2-_____
Date Searcher Picked up: 11/19/04
Date Completed: 11/22/04
Searcher Prep/Rev. Time: _____
Online Time: _____

Type of Search

NA Sequence: # _____
AA Sequence: # 1
Structure: # _____
Bibliographic: _____
Litigation: _____
Patent Family: _____
Other: _____

Vendors and cost where applicable

STN: _____
DIALOG: _____
QUESTEL/ORBIT: _____
LEXIS/NEXIS: _____
SEQUENCE SYSTEM: 11/22/04
WWW/Internet: _____
Other(Specify): _____

This Page Blank (uspto)

GenCore version 5.1.6
Copyright (c) 1993 - 2004 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: November 19, 2004, 15:45:45 ; Search time 38 Seconds

(without alignments)
106.345 Million cell updates/sec

Title: US-09-899-815-1

Perfect score: 218
Sequence: 1 DAEFRHDSGYEVHOKLVFPAEDVGSNKGATIGLMVGVVIA 42

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :

1: p1r1:*
2: p1r2:*
3: p1r3:*
4: p1r4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	210	96.3	42	2 PN0512	Beta-amyloid prote
2	210	96.3	57	2 A60045	Alzheimer's disease
3	210	96.3	57	2 F60045	Alzheimer's disease
4	210	96.3	57	2 D60045	Alzheimer's disease
5	210	96.3	57	2 E60045	Alzheimer's disease
6	210	96.3	57	2 G60045	Alzheimer's disease
7	210	96.3	57	2 B60045	Alzheimer's disease
8	210	96.3	82	2 PQ0438	Alzheimer's disease
9	210	96.3	695	1 A49795	Alzheimer's disease
10	210	96.3	770	1 ORH044	Alzheimer's disease
11	191	87.6	695	2 A27485	Alzheimer's disease
12	191	87.6	695	2 S00550	Alzheimer's disease
13	191	87.6	695	2 JH0773	Alzheimer's disease
14	126	57.8	33	2 S23094	Beta-amyloid prote
15	126	57.8	33	2 H90519	ABC transporter at
16	58	26.6	165	2 JCS667	multidrug resistanc
17	57	26.1	327	2 S11435	genome polypeptide
18	57	26.1	503	2 S73843	general amino acid
19	56.5	25.9	378	2 S61992	Stk1 protein - yea
20	56	25.7	735	2 A13228	tryptophan 2-monoo
21	55.5	25.5	832	2 H84848	phospholipase D (i
22	55	25.2	494	2 C70940	probable cobQ prot
23	55	25.2	539	2 A83903	ABC transporter (A
24	55	25.2	755	1 QOAGAT	tryptophan 2-monoo
25	55	25.2	3063	2 JS0166	genome polypeptide
26	54	24.8	77	2 C97027	isoA-like protein,
27	54	24.8	284	2 S04723	genome polypeptide
28	54	24.8	755	1 DAA6WT	tryptophan 2-monoo
29	54	24.8	889	2 E87304	TonB-dependent rec

30	53.5	24.5	708	2 T24727	hypothetical prote
31	53	24.3	216	2 E81347	cell division ATP-
32	53	24.3	223	2 F83598	cell division prote
33	53	24.3	406	2 T21271	hypothetical prote
34	53	24.3	422	2 D72302	hypothetical prote
35	53	24.3	527	2 T18232	conserved hypothet
36	53	24.3	1555	2 J70959	polypeptide - puta
37	52.5	24.1	247	2 T31140	hypothetical prote
38	52.5	24.1	287	2 G69525	formylmethanofuran
39	52.5	24.1	672	2 S52673	probable membrane
40	52	23.9	216	2 B82020	ABC transporter AT
41	52	23.9	217	2 A64133	ATP-binding transp
42	52	23.9	272	2 F70979	hypothetical prote
43	52	23.9	339	2 A81351	signal transductio
44	52	23.9	528	2 G87594	fatty aldehyde deh
45	51.5	23.6	833	2 T01547	probable phosphol

ALIGNMENTS

RESULT 1

PN0512
beta-amyloid protein - guinea pig (fragment)

C:Species: Cavia porcellus (Guinea pig)

C>Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 09-Jul-2004

C:Accession: PN0512

R:Shimohigashi, Y.; Matsumoto, H.; Takano, Y.; Saito, R.; Iwata, T.; Kamiya, H.; Ohno, Biochem. Biophys. Res. Commun. 193, 624-630, 1993

A>Title: Receptor-mediated specific biological activity of a beta-amyloid protein fragm

A:Reference number: PN0512; MUID:9320653; PMID:7685598

A:Accession: PN0512

A:Molecule type: protein

A:Residues: 1-42 <SH1>

A:Cross-references: UNIPROT:Q7M088

C:Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase

C:Keywords: alternative splicing; amyloid

Query Match 96.3%; Score 210; DB 2; Length 42;

Best Local Similarity 97.6%; Pred. No. 1.9e-20;

Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHOKLVFPAEDVGSNKGATIGLMVGVVIA 42

DB 1 DAEFRHDSGYEVHOKLVFPAEDVGSNKGATIGLMVGVVIA 42

6-7E

RESULT 2

A60045
Alzheimer's disease amyloid beta/A4 protein precursor - dog (fragment)

C:Species: Canis lupus familiaris (dog)

C>Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 28-Jul-1995

C:Accession: A60045

R:Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P. Brain Res. Mol. Brain Res. 10, 299-305, 1991

A>Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog

A:Reference number: A60045; MUID:92017079; PMID:1656157

A:Accession: A60045

A:Molecule type: mRNA

A:Residues: 1-57 <JOH>

A:Cross-references: EMBL:X56125

C:Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase

C:Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match 96.3%; Score 210; DB 2; Length 57;

Best Local Similarity 97.6%; Pred. No. 2.6e-20;

Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 DAEFRHDSGYEVHOKLVFPAEDVGSNKGATIGLMVGVVIA 42

DB 6 DAEFRHDSGYEVHOKLVFPAEDVGSNKGATIGLMVGVVIA 47

RESULT 3
F60045
Alzheimer's disease amyloid beta/A4 protein precursor - pig (fragment)
C/Species: Sus scrofa domestica (domestic pig)
C/Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 13-Aug-1999
C/Accession: F60045
R/Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.
Brain Res. Mol. Brain Res. 10, 299-305, 1991
A/Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog,
A/Reference number: A60045; MUID:92017079; PMID:1656157
A/Accession: F60045
A/Molecule type: mRNA
A/Residues: 1-57 <JOH>
A/Cross-references: EMBL:X56127; NID:G1895; PIDN:CAA39592.1; PID:G1896
C/Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase 1
C/Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match 96.3%; Score 210; DB 2; Length 57;
Best Local Similarity 97.6%; Pred. No. 2.6e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 42
|||||
DB 6 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 47

RESULT 4
D60045
Alzheimer's disease amyloid beta/A4 protein precursor - bovine (fragment)
C/Species: Bos primigenius taurus (cattle)
C/Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 28-Jul-1995
C/Accession: D60045
R/Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.
Brain Res. Mol. Brain Res. 10, 299-305, 1991
A/Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog,
A/Reference number: A60045; MUID:92017079; PMID:1656157
C/Accession: D60045
A/Molecule type: mRNA
A/Residues: 1-57 <JOH>
A/Cross-references: EMBL:X56124
C/Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase 1
C/Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match 96.3%; Score 210; DB 2; Length 57;
Best Local Similarity 97.6%; Pred. No. 2.6e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 42
|||||
DB 6 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 47

RESULT 5
E60045
Alzheimer's disease amyloid beta/A4 protein precursor - sheep (fragment)
C/Species: Ovis sp. (sheep)
C/Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 28-Jul-1995
C/Accession: E60045
R/Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.
Brain Res. Mol. Brain Res. 10, 299-305, 1991
A/Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog,
A/Reference number: A60045; MUID:92017079; PMID:1656157
C/Accession: E60045
A/Molecule type: mRNA
A/Residues: 1-57 <JOH>
A/Cross-references: EMBL:X56130
C/Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase 1
C/Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match 96.3%; Score 210; DB 2; Length 57;
Best Local Similarity 97.6%; Pred. No. 2.6e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 42
|||||
DB 6 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 47

RESULT 6
G60045
Alzheimer's disease amyloid beta/A4 protein precursor - guinea pig (fragment)
C/Species: Cavia porcellus (guinea pig)
C/Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 28-Jul-1995
C/Accession: G60045
R/Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.
Brain Res. Mol. Brain Res. 10, 299-305, 1991
A/Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog,
A/Reference number: A60045; MUID:92017079; PMID:1656157
C/Accession: G60045
A/Molecule type: mRNA
A/Residues: 1-57 <JOH>
A/Cross-references: EMBL:X56126
C/Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase 1
C/Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match 96.3%; Score 210; DB 2; Length 57;
Best Local Similarity 97.6%; Pred. No. 2.6e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 42
|||||
DB 6 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 47

RESULT 7
B60045
Alzheimer's disease amyloid beta/A4 protein precursor - polar bear (fragment)
C/Species: Ursus maritimus (polar bear)
C/Date: 01-Dec-1992 #sequence_revision 01-Dec-1992 #text_change 09-Jul-2004
C/Accession: B60045
R/Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.
Brain Res. Mol. Brain Res. 10, 299-305, 1991
A/Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog,
A/Reference number: A60045; MUID:92017079; PMID:1656157
C/Accession: B60045
A/Molecule type: mRNA
A/Residues: 1-57 <JOH>
A/Cross-references: UNIPROT:Q29149; EMBL:X56128; NID:G2165; PIDN:CAA39593.1; PID:G2166
C/Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase 1
C/Keywords: alternative splicing; Alzheimer's disease; amyloid; brain

Query Match 96.3%; Score 210; DB 2; Length 57;
Best Local Similarity 97.6%; Pred. No. 2.6e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 42
|||||
DB 6 DAEFRHDSGYEVHHQKLVFPFAGDVGSNKGAIIIGLMVGCVIA 47

RESULT 8
PQ0438
Alzheimer's disease amyloid A4 protein precursor - rabbit (fragment)
C/Species: Oryctolagus cuniculus (domestic rabbit)
C/Date: 30-Sep-1993 #sequence_revision 19-Oct-1995 #text_change 19-Oct-1995
C/Accession: PQ0438; C60045
R/Davidson, J.S.; West, R.L.; Kotikalapudi, P.; Maroun, L.E.
Biochem. Biophys. Res. Commun. 188, 905-911, 1992
A/Title: Sequence and methylation in the beta/A4 region of the rabbit amyloid precursor
A/Reference number: PQ0438; MUID:93075180; PMID:1445331
C/Accession: PQ0438
A/Molecule type: DNA
A/Residues: 1-82 <DAV>
A/Cross-references: GB:M83558; GB:M83657
R/Johnstone, E.M.; Chaney, M.O.; Norris, F.H.; Pascual, R.; Little, S.P.
Brain Res. Mol. Brain Res. 10, 299-305, 1991

A;Title: Conservation of the sequence of the Alzheimer's disease amyloid peptide in dog;
A;Reference number: A60045; MUID:92017079; PMID:1656157
A;Accession: C60045
A;Molecule type: mRNA
A;Residues: 12-68 <JOH>
A;Cross-references: EMBL:X56129
C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase 1
C;Keywords: alternative splicing; Alzheimer's disease; amyloid; Down's syndrome

Query Match 96.3%; Score 210; DB 2; Length 82;
Best Local Similarity 97.6%; Pred. No. 3.9e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGALITGLMGSVVIA 42
DB 17 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGALITGLMGSVVIA 58

RESULT 9
A49795
Alzheimer's disease amyloid beta protein precursor - crab-eating macaque
C;Species: Macaca fascicularis (crab-eating macaque)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: A49795
R;Podlasky, M.B.; Tolan, D.R.; Selkoe, D.J.
Am. J. Pathol. 138, 1423-1435, 1991
A;Title: Homology of the amyloid beta protein precursor in monkey and human supports a
A;Reference number: A49795; MUID:91273117; PMID:1905108
A;Accession: A49795
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-695 <POD>
A;Cross-references: GB:M58727; NID:G342062; PIDN:AAA36829.1; PID:G342063
C;Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase 1
C;Keywords: alternative splicing

Query Match 96.3%; Score 210; DB 1; Length 695;
Best Local Similarity 97.6%; Pred. No. 4e-19;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGALITGLMGSVVIA 42
DB 597 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGALITGLMGSVVIA 638

RESULT 10
Q8HDA4
Alzheimer's disease amyloid beta protein precursor [validated] - human
N;Alternate names: Alzheimer's disease amyloid A4 protein; coagulation factor XIa inhibi
N;Contents: amyloid beta protein long, plaque form; amyloid beta protein short, vasculat
N;Protein precursor splice form APP(770)
C;Species: Homo sapiens (man)
C;Date: 30-Jun-1987 #sequence_revision 28-Jul-1995 #text_change 15-Sep-2000
C;Accession: S02260; S05194; A32277; A33260; A35486; I39452; I39451; I39453; I59562; A44
4666; A28583; A29302; A60805; J10038; S06121; A60355; A59011; A38384; S29076; S38252; S3
R;Lemaire, H.G.; Salbaum, J.M.; Mutschers, G.; Kang, J.; Beyne, R.W.; Unterbeck, A.; Bey
NeuLeic Acids Res. 17, 517-522, 1989
A;Title: The preA4(695) precursor protein of Alzheimer's disease A4 amyloid is encoded b
A;Reference number: S02260; MUID:89128427; PMID:2783775
A;Accession: S02260
A;Molecule type: DNA
A;Residues: 1-288, 'V', 365-770 <LEM1>
A;Cross-references: EMBL:X13466
A;Note: alternative splice form APP(695)
R;Lemaire, H.G.
Submitted to the EMBL Data Library, November 1988
A;Reference number: S05194
A;Accession: S05194
A;Molecule type: DNA
A;Residues: 1-14, 'VW', 17-288, 'V', 365-770 <LEM2>
A;Cross-references: EMBL:X13466; NID:G35598; PIDN:CAA31830.1; PID:G871360
A;Note: alternative splice form APP(695)
R;La Pauci, G.; Lahiri, D.K.; Salton, S.R.J.; Roberts, N.K.

Biochem. Biophys. Res. Commun. 159, 297-304, 1989
A;Title: Characterization of the 5'-end region and the first two exons of the beta-prot
A;Reference number: A32277; MUID:89165870; PMID:258123
A;Accession: A32277
A;Molecule type: DNA
A;Residues: 1-75 <LAF>
A;Cross-references: GB:M24546; GB:M24547; NID:G341202; PIDN:AA33654.1; PID:G516074
R;Johnstone, E.M.; Chaney, M.O.; Moore, R.E.; Ward, K.E.; Norris, F.H.; Little, S.P.
Biochem. Biophys. Res. Commun. 163, 1248-1255, 1989
A;Title: Alzheimer's disease amyloid peptide is encoded by two exons and shows similari
A;Reference number: A33260; MUID:89392030; PMID:2675837
A;Accession: A33260
A;Molecule type: DNA
A;Residues: 656-737 <JOH>
A;Cross-references: GB:M29270; NID:G178663; PIDN:AAA51768.1; PID:G178665
R;Pirelli, F.; Levy, E.; van Duinen, S.G.; Boes, G.T.A.M.; Luyendijk, W.; Frangione, B.
Biochem. Biophys. Res. Commun. 170, 301-307, 1990
A;Title: Expression of a normal and variant Alzheimer's beta-protein gene in amyloid of
A;Reference number: A35486; MUID:90321244; PMID:2196878
A;Accession: A35486
A;Molecule type: DNA
A;Residues: 672-710 <PRE1>
A;Note: 693-Gln was found in DNA isolated from HCHWA-D patients
R;Yoshikai, S.I.; Sasaki, H.; Doh-ura, K.; Furuya, H.; Sasaki, Y.
Gene 87, 257-263, 1990
A;Title: Genomic organization of the human amyloid beta-protein precursor gene.
A;Reference number: I39451; MUID:90236318; PMID:2110105
A;Accession: I39452
A;Status: nucleic acid sequence not shown; translation not shown; translated from GB/EM
A;Molecule type: DNA
A;Residues: 1-770 <YOS1>
A;Cross-references: GB:M33112; NID:G178613; PIDN:AA55502.1; PID:G178616
A;Accession: I39451
A;Status: nucleic acid sequence not shown; translation not shown; translated from GB/EM
A;Molecule type: DNA
A;Residues: 1-530, 'QWLVPIPAFMEAKYGR' <YOS2>
A;Cross-references: GB:M34875; NID:G178608; PIDN:AA59501.1; PID:G178615
R;Yoshikai, S.I.; Sasaki, H.; Doh-ura, K.; Furuya, H.; Sasaki, Y.
Gene 102, 291-292, 1991
A;Reference number: A59020; MUID:91340168; PMID:1908403
A;Contents: annotation; erratum
A;Note: revised physical map for reference I39451
R;Levy, E.; Carmen, M.D.; Fernandez-Madrid, I.J.; Power, M.D.; Lieberburg, I.; van Duin
Science 240, 1124-1126, 1990
A;Title: Mutation of the Alzheimer's disease amyloid gene in hereditary cerebral hemorr
A;Reference number: I39453; MUID:90260663; PMID:2111584
A;Accession: I39453
A;Status: translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 636-737 <LEV>
A;Cross-references: GB:M37896; NID:G178618; PIDN:AAA51727.1; PID:G178620
A;Note: a mutation with 693-Gln is presented
R;Murrell, J.; Farlow, M.; Ghetti, B.; Benson, M.D.
Science 254, 97-99, 1991
A;Title: A mutation in the amyloid precursor protein associated with hereditary Alzheim
A;Reference number: I59562; MUID:92022553; PMID:1925564
A;Accession: I59562
A;Status: translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 689-716, 'F', 718-737 <MUR>
A;Cross-references: GB:S57665; NID:G236720; PIDN:AA819991.1; PID:G236721
R;Kamino, K.; Ort, H.T.; Payant, H.; Wajsbom, E.M.; Alonso, M.B.; Puls, S.M.; Anderson
arkatis, S.B.; Korenberg, J.R.; Sharma, V.; Kukull, W.; Larson, E.; Heaton, L.L.; Martin
Am. J. Hum. Genet. 51, 998-1014, 1992
A;Title: Linkage and mutational analysis of familial Alzheimer disease kindreds for the
A;Reference number: A44017; MUID:93035397; PMID:1415269
A;Accession: A44017
A;Molecule type: DNA
A;Residues: 687-692, 'G', 694-718 <KAM1>
A;Cross-references: GB:S45135; NID:G257377; PIDN:AA823645.1; PID:G257378
A;Experimental source: EMBL:Alzheimer disease family SB
A;Note: sequence extracted from NCBI backbone (NCBIF:115374)
A;Accession: B44017

A/Molecule type: DNA
A/Residues: 687-718 <KAM2>
A/Cross-references: GB:X45136; NID:g257379; PIDN:AA82646.1; PID:g257380
A/Experimental source: Familial Alzheimer disease family LIT
A/Note: sequence extracted from NCBI mutation (NCBI:P115376)
A/Note: this sequence has a silent mutation
R/Kang, J.; Lemaire, H.G.; Unterbeck, A.; Salbaum, J.M.; Masters, C.L.; Grzeschik, K.H.;
Nature 325, 733-736, 1987
A/Title: The precursor of Alzheimer's disease amyloid A4 protein resembles a cell-surface
A/Reference number: A03134; MUID:87120328; PMID:2881207
A/Accession: A03134
A/Molecule type: mRNA
A/Residues: 1-288, 'V', 365-770 <KAN>
A/Cross-references: GB:X00264; NID:g28525; PIDN:CAA6374.1; PID:g28526
A/Note: alternative splice form APP(695)
R/Robak, N.K.; Ramakrishna, N.; Wolfe, G.; Wlaniwski, H.M.
Proc. Natl. Acad. Sci. U.S.A. 84, 4190-4194, 1987
A/Title: Molecular cloning and characterization of a cDNA encoding the cerebrovascular A
A/Reference number: A29030; MUID:87231971; PMID:3035574
A/Accession: A29030
A/Molecule type: mRNA
A/Residues: 284-288, 'V', 365-646, 'E', 648-770 <ROB>
A/Cross-references: GB:M16765; NID:g178539; PIDN:AA51722.1; PID:g178540
A/Note: the authors translated the codon GAG for residue 647 as Asp
R/Goldgaber, D.; Lerman, M.I.; McBride, O.W.; Saffioti, U.; Gajdusek, D.C.
Science 235, 877-880, 1987
A/Title: Characterization and chromosomal localization of a cDNA encoding brain amyloid
A/Reference number: A47584; MUID:87120328; PMID:3810169
A/Accession: A47584
A/Molecule type: mRNA
A/Residues: 674-756, 'S', 758-770 <GOL>
A/Cross-references: GB:M15533; NID:g178706; PIDN:AA35540.1; PID:g178707
A/Experimental source: brain
R/Tanz, R.E.; Gusella, J.F.; Watkins, P.C.; Bruns, G.A.P.; St George-Hyslop, P.; Van Ke
Science 235, 880-884, 1987
A/Title: Amyloid beta protein gene: cDNA, mRNA distribution, and genetic linkage near ch
A/Reference number: A47585; MUID:87120329; PMID:2949367
A/Accession: A47585
A/Molecule type: mRNA
A/Residues: 674-703 <TAN1>
A/Cross-references: GB:M15532; NID:g177957; PIDN:AA51564.1; PID:g177958
R/Dyrks, T.; Wiedemann, A.; Multhaup, G.; Salbaum, J.M.; Lemaire, H.G.; Kang, J.; Muelie
EMBO J. 7, 949-957, 1988
A/Title: Identification, transmembrane orientation and biogenesis of the amyloid A4 prec
A/Reference number: S02638; MUID:86296437; PMID:2900137
A/Accession: S02638
A/Molecule type: mRNA
A/Residues: 672-678 <DYN>
R/Tanz, R.E.; McClatchey, A.I.; Lampert, E.D.; Villa-Komaroff, L.; Gusella, J.F.; Neve
Nature 331, 528-530, 1988
A/Title: Protease inhibitor domain encoded by an amyloid protein precursor mRNA associat
A/Reference number: S00707; MUID:86122640; PMID:2893290
A/Accession: S00707
A/Molecule type: mRNA
A/Residues: 286-344, 'I', 365-366 <TAN2>
A/Cross-references: EMBL:X06982; NID:g28817; PIDN:CAA30042.1; PID:g292612
A/Experimental source: promyelocytic leukemia cell line HL60
R/Ponte, P.; Gonzalez-Demhelt, P.; Schilling, J.; Miller, J.; Heu, D.; Greenberg, B.; Da
Nature 331, 527-527, 1988
A/Title: A new A4 amyloid mRNA contains a domain homologous to serine proteinase inhibit
A/Reference number: S00925; MUID:86122639; PMID:2893289
A/Accession: S00925
A/Molecule type: mRNA
A/Residues: 1-344, 'I', 365-770 <PO2>
A/Cross-references: GB:X06989; EMBL:Y00297; NID:g28720; PIDN:CAA30050.1; PID:g28721
A/Note: alternative splice form APP(751)
R/Kikuchi, N.; Takahashi, Y.; Tokushima, Y.; Shiojiri, S.; Ito, H.
Nature 331, 530-532, 1988
A/Title: Novel precursor of Alzheimer's disease amyloid protein shows protease inhibitor
A/Reference number: A38949; MUID:86122641; PMID:2893291
A/Accession: A38949
A/Molecule type: mRNA

A/Residues: 287-367 <KIT>
A/Cross-references: GB:X06981; NID:g28816; PIDN:CAA30041.1; PID:g289611
A/Experimental source: glioblastoma cell line
A/Note: alternative splice form APP(770)
R/Vitek, M.P.; Rasool, C.G.; de Sauvage, F.; Vitek, S.M.; Bartus, R.T.; Beer, B.; Ashton
Brain Res. Mol. Brain Res. 4, 121-131, 1988
A/Title: Absence of mutation in the beta-amyloid cDNAs cloned from the brains of three i
A/Reference number: A30320
A/Accession: A30320
A/Status: not compared with conceptual translation
A/Molecule type: mRNA
A/Residues: 284-288, 'V', 365-770 <VIT1>
A/Accession: B30320
A/Status: not compared with conceptual translation
A/Molecule type: mRNA
A/Residues: 122-288, 'V', 365-770 <VIT2>
A/Accession: C30320
A/Status: not compared with conceptual translation
A/Molecule type: mRNA
A/Residues: 606-770 <VIT3>
R/Zain, S.B.; Salim, M.; Chou, W.G.; Sajdel-Sulkowska, E.M.; Majocha, R.E.; Marotta, C.
Proc. Natl. Acad. Sci. U.S.A. 85, 929-933, 1988
A/Title: Molecular cloning of amyloid cDNA derived from mRNA of the Alzheimer disease b
A/Reference number: A31087; MUID:86124954; PMID:2893379
A/Accession: A31087
A/Molecule type: mRNA
A/Residues: 507-770 <ZAI>
A/Cross-references: GB:M18734; NID:g178572; PIDN:AA51726.1; PID:g178573
A/Note: the authors translated the codon GAA for residue 599 as Gly, ACC for residue 60
8 as Val, GTG for residue 609 as Asn, AAT for residue 610 as Gly, and GGT for residue 6
A/Note: the cited Genbank accession number, J03594, is not in release 101.0
R/Masters, C.L.; Multhaup, G.; Simms, G.; Potgiesser, J.; Martins, R.N.; Beyreuther, K
Query Match 96.3%; Score 210; DB 1; Length 770;
Best Local Similarity 97.6%; Pred. No. 4; Se-19;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
OY 1 DAEFRHDSGYEVHOKLVFPAGDVGNSKGAIIIGLVGVVIA 42
DB 672 DAEFRHDSGYEVHOKLVFPAGDVGNSKGAIIIGLVGVVIA 713
RESULT 11
A27485
Alzheimer's disease amyloid beta/A4 protein homolog precursor - mouse
N/Alternate names: proteinase nexin II
C/Date: 31-Mar-1989 #sequence, revision 31-Mar-1989 #text_change 09-Jul-2004
C/Accession: A27485; S19727; I49485
R/Ymada, T.; Sasaki, H.; Furuya, H.; Miyata, T.; Goto, I.; Sasaki, Y.
Biochem. Biophys. Res. Commun. 149, 665-671, 1987
A/Title: Complementary DNA for the mouse homolog of the human amyloid beta protein prec
A/Reference number: A27485; MUID:86106489; PMID:3322280
A/Accession: A27485
A/Molecule type: mRNA
A/Residues: 1-695 <YMA>
A/Cross-references: UNIPROT:P12023; GB:M18373; NID:g191568; PIDN:AA37139.1; PID:g30908
A/Experimental source: brain
R/de Strooper, B.; van Leuven, F.; van den Bergh, H.
Biochim. Biophys. Acta 1129, 141-143, 1991
A/Title: The amyloid beta protein precursor or proteinase nexin II from mouse is closer
A/Reference number: S19727; MUID:92096458; PMID:1756177
A/Accession: S19727
A/Molecule type: mRNA
A/Residues: 1-210, 'G', 212-220, 'S', 222-396, 'A', 398-402, 'T', 404-448, 'A', 450-695 <STR>
A/Cross-references: EMBL:X59379
R/Isumi, R.; Yamada, T.; Yoshikata, S.; Sasaki, H.; Hattori, M.; Sasaki, Y.
Gene 112, 189-195, 1992
A/Title: Positive and negative regulatory elements for the expression of the Alzheimer'
A/Reference number: I49485; MUID:92209958; PMID:1555768
A/Accession: I49485
A/Status: translated from GB/EMBL/DBJ
A/Molecule type: DNA

A:Residues: 1-19 <RES>
A:Cross-references: GB:D10603; NID:g220328; PIDN:BA01456.1; PID:g220329
C:Genetics:
A:Map position: 16C3
C:Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase i
C:Keywords: alternative splicing; amyloid; transmembrane protein

Query Match 87.6%; Score 191; DB 2; Length 695;
Best Local Similarity 90.5%; Pred. No. 1.le-16;
Matches 38; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 DAFFRHDSGYEVHHOKLVFPAGDVGSNKGAIIIGLMVGSVIA 42
|||||
Db 597 DAEFGHDSGFVRRHKLVFPADVDGNSKGAIIIGLMVGSVIA 638
|||||

RESULT 12
S00550
Alzheimer's disease amyloid beta protein precursor - rat
N:Alternate names: beta-A4 amyloid protein
C:Species: Rattus norvegicus (Norway rat)
C>Date: 30-Jun-1989 #sequence Revision 30-Jun-1989 #text_change 09-Jul-2004
A:Accession: S00550; A41245; A39820; S46251
R:Shivers, B.D.; Hlilbach, C.; Multhaup, G.; Salbaum, M.; Beyreuther, K.; Seeburg, P.H.
EMBO J. 7, 1365-1370, 1988
A>Title: Alzheimer's disease amyloidogenic glycoprotein: expression pattern in rat brain
A:Reference number: S00550; MUID:88312583; PMID:2900758
A:Accession: S00550
A:Molecule type: mRNA
A:Residues: 1-695 <SHI>
A:Cross-references: UNIPROT:P08592; EMBL:X07648; NID:g55616; PIDN:CAA30488.1; PID:g55617
R:Schubert, D.; Schroeder, R.; Lacobdierre, M.; Saitoh, T.; Cole, G.
Science 241, 223-226, 1988
A>Title: Amyloid beta protein precursor is possibly a heparan sulfate proteoglycan core
A:Reference number: A41245; MUID:88264430; PMID:2966652
A:Accession: A41245
A:Molecule type: protein
A:Residues: 18-37,'X','X',39-40,'X',42-44 <SCH>
A>Note: evidence for heparan sulfate attachment
R:Hesse, L.; Behr, D.; Masters, C.L.; Multhaup, G.
FEBS Lett. 349, 109-116, 1994
A>Title: The beta-A4 amyloid precursor protein binding to copper.
A:Reference number: S46251; MUID:94320627; PMID:7913895
A:Contents: annotation; copper binding sites
A>Note: rat peptides were isolated but not sequenced
R:Pompeška, A.; Styles, J.; Mehta, P.; Kim, K.S.; Miller, D.L.
J. Biol. Chem. 266, 8464-8469, 1991
A>Title: Purification and tissue level of the beta-amyloid peptide precursor of rat brain
A:Reference number: A39820; MUID:91217087; PMID:1673681
A:Accession: A39820
A>Status: Preliminary
A:Molecule type: protein
A:Residues: 18-32 <POT>
A:Experimental source: brain
C:Comment: Deposition of amyloid protein as neurofibrillary tangles and/or plaques is ch
C:Superfamily: Alzheimer's disease amyloid beta protein; animal Kunitz-type proteinase i
C:Keywords: alternative splicing; amyloid; glycoprotein; transmembrane protein
F:625-648/Domain: transmembrane #status predicted <TM>

Query Match 87.6%; Score 191; DB 2; Length 695;
Best Local Similarity 90.5%; Pred. No. 1.le-16;
Matches 38; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

OY 1 DAFFRHDSGYEVHHOKLVFPAGDVGSNKGAIIIGLMVGSVIA 42
|||||
Db 597 DAEFGHDSGFVRRHKLVFPADVDGNSKGAIIIGLMVGSVIA 638
|||||

RESULT 13
JH0773
Alzheimer's disease amyloid beta protein precursor - African clawed frog
C:Species: Xenopus laevis (African clawed frog)
C>Date: 10-Jun-1993 #sequence_Revision 10-Jun-1993 #text_change 13-Aug-1999

[illegible]

Db 18 NDFNLELDSNNKLIPIITGSSGSKTTLN-MIGNIVL 52

Search completed: November 19, 2004, 15:55:22
Job time : 40 secs


```

RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RA MEDLINE=92017079; PubMed=1656157;
RA Johnstone E.M., Chaney M.O., Norris F.H., Pascual R., Little S.P.;
RT "Conservation of the sequence of the Alzheimer's disease amyloid
RT peptide in dog, polar bear and five other mammals by cross-species
RT polymerase chain reaction analysis.";
RL Brain Res. Mol. Brain Res. 10:299-305(1991).
CC -1- FUNCTION: Functional neuronal receptor which couples to
CC intracellular signaling pathway through the GTP-binding protein
CC G(O) (By similarity).
CC -1- SUBCELLULAR LOCATION: Type I membrane protein.
CC -1- SIMILARITY: Belongs to the APP family.
-----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.1sb-sib.ch/announce/
CC or send an email to license@1sb-sib.ch).
-----
CC EMBL; X56128; CA39593.1; -.
CC PIR; B60045; B60045.
CC HSSP; P08592; INMJ.
CC InterPro; IPR008155; A4 APP.
CC InterPro; IPR001255; Beta-APP.
CC Pfam; PF03494; Beta-APP; 1.
CC PRINTS; PR00204; BETAAMYLOID.
CC PROSITE; PS00319; A4 EXTRA; PARTIAL.
CC PROSITE; PS00320; A4 INTRA; PARTIAL.
CC Amyloid; Glycoprotein; Transmembrane.
FT CHAIN 1 1
FT DOMAIN 6 48 Beta-amyloid protein (Potential).
FT TRANSMEM 34 57 Extracellular (Potential).
FT NON TER 57 57 Potential.
SQ SEQUENCE 57 AA; 6172 MW; 84209D8EBA82DFA CRC64;

Query Match 96.3%; Score 210; DB 1; Length 57;
Best Local Similarity 97.6%; Pred. No. 8.7e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 DAEFRHDSGYEVHOKLVFPAGDVGSNKGAIIGLMVGVIA 42
DB 6 DAEFRHDSGYEVHOKLVFPAGDVGSNKGAIIGLMVGVIA 47

RESULT 3
A4 CANFA STANDARD; PRT; 58 AA.
ID A4 CANFA
AC Q28280;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE Alzheimer's disease amyloid A4 protein homolog [contains: Beta-amyloid
DE protein (Beta-APP) (A-beta)] (Fragment).
GN Name=APP;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniala; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX NCBI_TaxID=9615;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Kidney;
RA MEDLINE=92017079; PubMed=1656157;
RA Johnstone E.M., Chaney M.O., Norris F.H., Pascual R., Little S.P.;
RT "Conservation of the sequence of the Alzheimer's disease amyloid
RT peptide in dog, polar bear and five other mammals by cross-species
RT polymerase chain reaction analysis.";
RL Brain Res. Mol. Brain Res. 10:299-305(1991).
CC -1- FUNCTION: Functional neuronal receptor which couples to
CC intracellular signaling pathway through the GTP-binding protein

```

```

CC G(O) (By similarity).
CC -1- SUBCELLULAR LOCATION: Type I membrane protein.
CC -1- SIMILARITY: Belongs to the APP family.
-----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.1sb-sib.ch/announce/
CC or send an email to license@1sb-sib.ch).
-----
CC EMBL; X56125; CA39590.1; -.
CC HSSP; P08592; INMJ.
CC InterPro; IPR008155; A4 APP.
CC InterPro; IPR001255; Beta-APP.
CC Pfam; PF03494; Beta-APP; 1.
CC PRINTS; PR00204; BETAAMYLOID.
CC PROSITE; PS00319; A4 EXTRA; PARTIAL.
CC PROSITE; PS00320; A4 INTRA; PARTIAL.
CC Amyloid; Glycoprotein; Transmembrane.
FT CHAIN 1 1
FT DOMAIN 7 49 Beta-amyloid protein (Potential).
FT TRANSMEM 35 58 Extracellular (Potential).
FT NON TER 58 58 Potential.
SQ SEQUENCE 58 AA; 6285 MW; 8469D48A2B12DFA CRC64;

Query Match 96.3%; Score 210; DB 1; Length 58;
Best Local Similarity 97.6%; Pred. No. 8.9e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 DAEFRHDSGYEVHOKLVFPAGDVGSNKGAIIGLMVGVIA 42
DB 7 DAEFRHDSGYEVHOKLVFPAGDVGSNKGAIIGLMVGVIA 48

RESULT 4
A4 RABIT STANDARD; PRT; 58 AA.
ID A4 RABIT
AC Q28748;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE Alzheimer's disease amyloid A4 protein homolog [contains: Beta-amyloid
DE protein (Beta-APP) (A-beta)] (Fragment).
GN Name=APP;
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniala; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RA MEDLINE=92017079; PubMed=1656157;
RA Johnstone E.M., Chaney M.O., Norris F.H., Pascual R., Little S.P.;
RT "Conservation of the sequence of the Alzheimer's disease amyloid
RT peptide in dog, polar bear and five other mammals by cross-species
RT polymerase chain reaction analysis.";
RL Brain Res. Mol. Brain Res. 10:299-305(1991).
CC -1- FUNCTION: Functional neuronal receptor which couples to
CC intracellular signaling pathway through the GTP-binding protein
CC G(O) (By similarity).
CC -1- SUBCELLULAR LOCATION: Type I membrane protein.
CC -1- SIMILARITY: Belongs to the APP family.
-----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.1sb-sib.ch/announce/
CC or send an email to license@1sb-sib.ch).

```

```

CC -----
DR EMBL; X56129; CAA39594.1; -.
DR HSSP; P08592; INMJ.
DR InterPro; IPR008155; A4-APP.
DR InterPro; IPR001255; Beta-APP.
DR Pfam; PF03494; Beta-APP; 1.
DR PRINTS; PR00204; BETAAMYLOID.
DR PROSITE; PS00319; A4-EXTRA; PARTIAL.
DR PROSITE; PS00320; A4-INTRA; PARTIAL.
KW Amyloid; Glycoprotein; Transmembrane.
FT CHAIN 1
FT NON TER 1
FT DOMAIN 6 48 Beta-amyloid protein (Potential).
FT TRANSMEM 34 57 Extracellular (Potential).
FT DOMAIN 58 58 Potential.
FT NON TER 58 58 Cytoplasmic (Potential).
SQ SEQUENCE 58 AA; 6300 MW; F434209D88EBA82D CRC64;

Query Match 96.3%; Score 210; DB 1; Length 58;
Best Local Similarity 97.6%; Pred. No. 8.9e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAERHDSGYEVHHQKLVFPAGDVSNGKAIIGLMVGVIA 42
Db 6 DAERHDSGYEVHHQKLVFPAGDVSNGKAIIGLMVGVIA 47

RESULT 5
A4-SHEEP
ID A4-SHEEP STANDARD; PRT; 58 AA.
AC Q28757;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE Alzheimer's disease amyloid A4 protein homolog [Contains: Beta-amyloid
DE protein (Beta-APP) (A-beta)] (Fragment).
GN Name=APP;
OS Ovis aries (Sheep);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Caprinae; Ovis.
OX NCBI_TaxID=9940;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Heart;
RA Johnstone E.M., Chaney M.O., Norris F.H., Pascual R., Little S.P.;
RT "Conservation of the sequence of the Alzheimer's disease amyloid
RT peptide in dog, polar bear and five other mammals by cross-species
RT polymerase chain reaction analysis.";
RL Brain Res. Mol. Brain Res. 10:299-305 (1991).
CC -1- FUNCTION: Functional neuronal receptor which couples to
CC intracellular signaling pathway through the GTP-binding protein
CC G(O) (By similarity).
CC -1- SUBCELLULAR LOCATION: Type I membrane protein.
CC -1- SIMILARITY: Belongs to the APP family.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; X56130; CAA39595.1; -.
DR HSSP; P08592; INMJ.
DR InterPro; IPR008155; A4-APP.
DR InterPro; IPR001255; Beta-APP.
DR Pfam; PF03494; Beta-APP; 1.
DR PRINTS; PR00204; BETAAMYLOID.
DR PROSITE; PS00319; A4-EXTRA; PARTIAL.
DR PROSITE; PS00320; A4-INTRA; PARTIAL.

```

```

KW Amyloid; Glycoprotein; Transmembrane.
FT CHAIN 1
FT NON TER 1
FT DOMAIN 6 48 Beta-amyloid protein (Potential).
FT TRANSMEM 34 57 Extracellular (Potential).
FT DOMAIN 58 58 Potential.
FT NON TER 58 58 Cytoplasmic (Potential).
SQ SEQUENCE 58 AA; 6300 MW; F434209D88EBA82D CRC64;

Query Match 96.3%; Score 210; DB 1; Length 58;
Best Local Similarity 97.6%; Pred. No. 8.9e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAERHDSGYEVHHQKLVFPAGDVSNGKAIIGLMVGVIA 42
Db 6 DAERHDSGYEVHHQKLVFPAGDVSNGKAIIGLMVGVIA 47

RESULT 6
A4-BOVIN
ID A4-BOVIN STANDARD; PRT; 59 AA.
AC Q28053;
DT 01-NOV-1997 (Rel. 35, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 05-JUL-2004 (Rel. 44, Last annotation update)
DE Alzheimer's disease amyloid A4 protein homolog [contains: Beta-amyloid
DE protein (Beta-APP) (A-beta)] (Fragment).
GN Name=APP;
OS Bos taurus (Bovine);
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC Bovinae; Bos.
OX NCBI_TaxID=9913;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RA Johnstone E.M., Chaney M.O., Norris F.H., Pascual R., Little S.P.;
RT "Conservation of the sequence of the Alzheimer's disease amyloid
RT peptide in dog, polar bear and five other mammals by cross-species
RT polymerase chain reaction analysis.";
RL Brain Res. Mol. Brain Res. 10:299-305 (1991).
CC -1- FUNCTION: Functional neuronal receptor which couples to
CC intracellular signaling pathway through the GTP-binding protein
CC G(O) (By similarity).
CC -1- SUBCELLULAR LOCATION: Type I membrane protein.
CC -1- SIMILARITY: Belongs to the APP family.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; X56124; CAA39589.1; -.
DR EMBL; X56126; CAA39591.1; -.
DR HSSP; P08592; INMJ.
DR InterPro; IPR008155; A4-APP.
DR InterPro; IPR001255; Beta-APP.
DR Pfam; PF03494; Beta-APP; 1.
DR PRINTS; PR00204; BETAAMYLOID.
DR PROSITE; PS00319; A4-EXTRA; PARTIAL.
DR PROSITE; PS00320; A4-INTRA; PARTIAL.
KW Amyloid; Glycoprotein; Transmembrane.
FT CHAIN 1
FT NON TER 1
FT DOMAIN 7 49 Beta-amyloid protein (Potential).
FT TRANSMEM 35 58 Extracellular (Potential).
FT DOMAIN 59 58 Potential.
FT NON TER 59 58 Cytoplasmic (Potential).
SQ SEQUENCE 59 AA; 6414 MW; F43469D488A2E12D CRC64;

```

Query Match 96.3%; Score 210; DB 1; Length 59;
Best Local Similarity 97.6%; Pred. No. 9e-20;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGCVVIA 42
DB 7 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGCVVIA 48

RESULT 7
Q8JH58 PRELIMINARY; PRT; 113 AA.
AC Q8JH58;
DT 01-OCT-2002 (TrEMBLrel. 22, Created)
DT 01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Amyloid beta protein (Fragment).
OS Chelydra serpentina serpentina (common snapping turtle).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Testudines; Cryptodira; Testudinoidae; Chelydridae; Chelydra.
NCBI_TaxID=134619;
OK NCBI_TaxID=134619;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=21876906; PubMed=11882478;
RA Trudeau V.L., Chiu S., Kennedy S.W., Brooke R.J.;
RT "Octylphenol (OP) alters the expression of members of the amyloid
protein family in the hypothalamus of the snapping turtle, Chelydra
serpentina serpentina."
RL Environ. Health Perspect. 110:269-275 (2002).
DR EMBL; AF541917; AN04908.1; -
DR GO; GO:0016021; C:integral to membrane; IEA.
DR GO; GO:0005488; F:binding; IEA.
DR InterPro; IPR008155; A4_APP.
DR InterPro; IPR001255; Beta-APP.
DR Pfam; PF03494; Beta-APP; 1.
DR PRINTS; PR00203; AMYLOIDA4.
DR PRINTS; PR00204; BETAMYLOID.
DR PROSITE; PS00320; A4_INTRA; 1.
FT NON_TER 1
SQ SEQUENCE 113 AA; 12750 MW; 72515C930496E053 CRC64;

Query Match 96.3%; Score 210; DB 2; Length 113;
Best Local Similarity 97.6%; Pred. No. 1.7e-19;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGCVVIA 42
DB 15 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGCVVIA 56

RESULT 8
Q93296 PRELIMINARY; PRT; 534 AA.
AC Q93296;
DT 01-NOV-1998 (TrEMBLrel. 08, Created)
DT 01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Amyloid protein (Fragment).
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
NCBI_TaxID=9031;
OK NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=98337885; PubMed=9671674;
RA Barnes N.Y., Li L., Yoshikawa K., Schwartz L.M., Oppenheim R.W.,
RA Milligan C.E.;
RT "Increased production of amyloid precursor protein provides a
substrate for caspase-3 in dying motoneurons."
RL J. Neurosci. 18:5869-5880 (1998).
DR EMBL; AF042098; AAC25052.1; -

DR GO; GO:0016021; C:integral to membrane; IEA.
DR GO; GO:0005488; F:binding; IEA.
DR InterPro; IPR008155; A4_APP.
DR InterPro; IPR008154; A4_extra.
DR InterPro; IPR001255; Beta-APP.
DR Pfam; PF02177; A4_EXTRA; 1.
DR Pfam; PF03494; Beta-APP; 1.
DR PRINTS; PR00203; AMYLOIDA4.
DR PRINTS; PR00204; BETAMYLOID.
DR PROSITE; PS00319; A4_EXTRA; 1.
DR PROSITE; PS00320; A4_INTRA; 1.
FT NON_TER 1
SQ SEQUENCE 534 AA; 60597 MW; FB53ECC2B66D4C92 CRC64;

Query Match 96.3%; Score 210; DB 2; Length 534;
Best Local Similarity 97.6%; Pred. No. 8e-19;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGCVVIA 42
DB 436 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGCVVIA 477

RESULT 9
Q9PVL1 PRELIMINARY; PRT; 569 AA.
AC Q9PVL1;
DT 01-MAY-2000 (TrEMBLrel. 13, Created)
DT 01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE Amyloid protein (Fragment).
GN Name=APP;
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
NCBI_TaxID=9031;
OK NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RA Coulson B.J., Paliga K., Beyreuther K., Masters C.L.;
RT "What the evolution of the amyloid protein precursor supergene family
tells us about its function."
RL Neurochem. Int. 0:0-0 (2000).
DR EMBL; AF030341; AAP12698.1; -
DR GO; GO:0016021; C:integral to membrane; IEA.
DR GO; GO:0005488; F:binding; IEA.
DR InterPro; IPR008155; A4_APP.
DR InterPro; IPR008154; A4_extra.
DR InterPro; IPR001255; Beta-APP.
DR Pfam; PF02177; A4_EXTRA; 1.
DR Pfam; PF03494; Beta-APP; 1.
DR PRINTS; PR00203; AMYLOIDA4.
DR PRINTS; PR00204; BETAMYLOID.
DR PROSITE; PS00319; A4_EXTRA; 1.
DR PROSITE; PS00320; A4_INTRA; 1.
FT NON_TER 1
SQ SEQUENCE 569 AA; 64753 MW; 0AB8B851863A19D CRC64;

Query Match 96.3%; Score 210; DB 2; Length 569;
Best Local Similarity 97.6%; Pred. No. 8.6e-19;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGCVVIA 42
DB 472 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGCVVIA 513

RESULT 10
Q6RH29 PRELIMINARY; PRT; 695 AA.
AC Q6RH29;
DT 05-JUL-2004 (TrEMBLrel. 27, Created)

DT 05-JUL-2004 (Tremblrel. 27, last sequence update)
DE Beta amyloid protein isoform APP695.
GN Name=Beta APP;
OS Canis familiaris (dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX NCBI_TaxID=9615;
RN [1]
RP SEQUENCE FROM N.A.
RA Nakata M.;
RL Submitted (DEC-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY498707; AAR97727.1; -
DR InterPro; IPR008155; A4_APP.
DR InterPro; IPR008154; A4_EXTRA.
DR InterPro; IPR001255; Beta-APP.
DR Pfam; PF02177; A4_EXTRA; 1.
DR PRINTS; PR00203; AMYLOIDA4.
DR SMART; SM00006; A4_EXTRA; 1.
DR PROSITE; PS00319; A4_EXTRA; 1.
DR PROSITE; PS00320; A4_INTRA; 1.
SQ SEQUENCE 695 AA; 78649 MW; 718CA42A9F9E6C10 CRC64;

Query Match 96.3%; Score 210; DB 2; Length 695;
Best Local Similarity 97.6%; Pred. No. 1e-18;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSKNGAIIIGLMVGVVIA 42
Db 597 DAEFRHDSGYEVHHQKLVFPAGDVGSKNGAIIIGLMVGVVIA 638

Db 597 DAEFRHDSGYEVHHQKLVFPAGDVGSKNGAIIIGLMVGVVIA 638

RESULT 12
ID AAR97727 PRELIMINARY; PRT; 695 AA.
AC AAR97727;
DT 02-MAR-2004 (Tremblrel. 27, Created)
DT 02-MAR-2004 (Tremblrel. 27, last sequence update)
DT 02-MAR-2004 (Tremblrel. 27, last annotation update)
DE Beta amyloid protein isoform APP695.
GN BETA APP.
OS Canis familiaris (dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX NCBI_TaxID=9615;
RN [1]
RP SEQUENCE FROM N.A.
RA Nakata M.;
RL "Sequence analysis and chromosomal mapping of presenilin-1 and amyloid precursor protein genes in dogs."
RT Submitted (DEC-2003) to the EMBL/GenBank/DBJ databases.
DR EMBL; AY498707; AAR97727.1; -
SQ SEQUENCE 695 AA; 78649 MW; 718CA42A9F9E6C10 CRC64;

Query Match 96.3%; Score 210; DB 2; Length 695;
Best Local Similarity 97.6%; Pred. No. 1e-18;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSKNGAIIIGLMVGVVIA 42
Db 597 DAEFRHDSGYEVHHQKLVFPAGDVGSKNGAIIIGLMVGVVIA 638

RESULT 11
ID Q9DGJ8 PRELIMINARY; PRT; 695 AA.
AC Q9DGJ8;
DT 01-MAR-2001 (Tremblrel. 16, Created)
DT 01-MAR-2001 (Tremblrel. 16, last sequence update)
DT 01-MAR-2004 (Tremblrel. 26, last annotation update)
DE Beta-amyloid protein 695 isoform.
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OX NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RA Sarasa M., Rodolase A., Sorribas V.;
RL Submitted (JUL-2000) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF289218; AAG00593.1; -
DR HSSP; P08592; INMJ.
DR GO; GO:0016021; C:Integral to membrane; IEA.
DR GO; GO:0005488; F:Binding; IEA.
DR InterPro; IPR008155; A4_APP.
DR InterPro; IPR008154; A4_EXTRA.
DR InterPro; IPR001255; Beta-APP.
DR Pfam; PF02177; A4_EXTRA; 1.
DR Pfam; PF03494; Beta-APP; 1.
DR PRINTS; PR00203; AMYLOIDA4.
DR PRINTS; PR00204; BETAMVLOID.
DR SMART; SM00006; A4_EXTRA; 1.
DR PROSITE; PS00319; A4_EXTRA; 1.
DR PROSITE; PS00320; A4_INTRA; 1.
SQ SEQUENCE 695 AA; 78565 MW; F201BD02AEC86D95 CRC64;

Query Match 96.3%; Score 210; DB 2; Length 695;
Best Local Similarity 97.6%; Pred. No. 1e-18;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSKNGAIIIGLMVGVVIA 42
Db 597 DAEFRHDSGYEVHHQKLVFPAGDVGSKNGAIIIGLMVGVVIA 638

RESULT 13
ID A4_SATSC STANDARD; PRT; 751 AA.
AC Q95241;
DT 15-DEC-1998 (Rel. 37, Created)
DT 15-DEC-1998 (Rel. 37, last sequence update)
DT 05-JUL-2004 (Rel. 44, last annotation update)
DE Amyloid beta A4 protein precursor (APP) (Alzheimer's disease amyloid protein homolog) [contains: Soluble APP-alpha (S-APP-alpha); Soluble APP-beta (S-APP-beta); C99; Beta-amyloid protein 42 (Beta-APP42); Beta-amyloid protein 40 (Beta-APP40); C83; P3(42); P3(40); Gamma-CTF(59) (Gamma-secretase C-terminal fragment 59); Gamma-CTF(57) (Gamma-secretase C-terminal fragment 57); Gamma-CTF(50) (Gamma-secretase C-terminal fragment 50); C31].
GN Name=APP;
OS Saimiri sciureus (Common squirrel monkey).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Platyrrhini; Cebidae; Saimiri.
OX NCBI_TaxID=9521;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Kidney, and Liver;
RX MEDLINE=96108492; PubMed=8532114;
RA Levy E., Amorim A., Frangione B., Walker L.C.;
RT "Beta-amyloid precursor protein gene in squirrel monkeys with cerebral amyloid angiopathy."
RL Neurobiol. Aging 16:805-808(1995).
CC -!- FUNCTION: Functions as a cell surface receptor and performs physiological functions on the surface of neurons relevant to neurite growth, neuronal adhesion and axonogenesis. Involved in cell mobility and transcription regulation through protein-protein interactions (By similarity). Can promote transcription activation through binding to ABBB1/Tip60 and inhibit Notch signaling through interaction with Numb (By similarity). Couples to apoptosis-inducing pathways such as those mediated by G(O) and JIP (By similarity). Inhibits G(O) alpha ATPase activity (By similarity). Acts as a kinase I membrane receptor, mediating the axonal transport of beta-secretase and presenilin 1 (By similarity). May be involved in copper homeostasis/oxidative stress through copper

ion reduction. In vitro, copper-metallated APP induces neuronal death directly or is potentiated through Cu(II)-mediated low-density lipoprotein oxidation (By similarity). Can regulate neurite outgrowth through binding to components of the extracellular matrix such as heparin and collagen I and IV (By similarity). The splice isoforms that contain the BPTI domain possess protease inhibitor activity (By similarity).

-1- FUNCTION: Beta-amyloid peptides are lipophilic metal chelators with metal-reducing activity. Bind transient metals such as copper, zinc and iron (By similarity).

-1- FUNCTION: The gamma-CTF peptides as well as the caspase-cleaved peptides, including C31, are potent enhancers of neuronal apoptosis (By similarity).

-1- SUBUNIT: Binds, via its C-terminal, to the PID domain of several cytoplasmic proteins, including APPB family members, the APPA family, MAP3IP1, and SHC1, Numb and Dab1 (By similarity). Binding to Dab1 inhibits its serine phosphorylation (By similarity). Also interacts with GPCR-like protein BPP, FPR1, APPP1, IBI, KNS2 (via its TPR domains) (By similarity), APPBP2 (via Bass) and DDB1. In vitro, it binds MAP7 via the MT-binding domains (By similarity). Associates with microtubules in the presence of ATP and in a kinesin-dependent manner (By similarity).

-1- SUBCELLULAR LOCATION: Type I membrane protein. Cell surface protein that rapidly becomes internalized via clathrin-coated pits. During maturation, the immature APP (N-glycosylated in the endoplasmic reticulum) moves to the Golgi complex where complete maturation occurs (O-glycosylated and sulfated). After alpha-secretase cleavage, soluble APP is released into the extracellular space and the C-terminal is internalized to endosomes and lysosomes. Some APP accumulates in secretory transport vesicles leaving the late Golgi compartment and returns to the cell surface. Gamma-CTF(59) peptide is located to both the cytoplasm and nuclei of neurons (By similarity).

-1- ALTERNATIVE PRODUCTS:

-1- Event-Alternative splicing; Named isoforms=2;

Comment=Additional isoforms seem to exist;

Name=APP770;

ISOID=095241-1; Sequence=Displayed;

Name=APPe95;

ISOID=095241-2; Sequence=Not described;

-1- DOMAIN: The basolateral sorting signal (BASS) is required for sorting of membrane proteins to the basolateral surface of epithelial cells (By similarity).

-1- DOMAIN: The NPYX sequence motif found in many tyrosine-phosphorylated proteins is required for the specific binding of the PID domain. However additional amino acids either N- or C-terminal to the NPYX motif are often required for complete interaction. The PID domain-containing proteins which bind APP require the YENPTY motif for full interaction. These interactions are independent of phosphorylation on the terminal tyrosine residue. The NPYX site is also involved in clathrin-mediated endocytosis (By similarity).

-1- PTM: Proteolytically processed under normal cellular conditions. Cleavage by alpha-secretase or alternatively by beta-secretase leads to generation and extracellular release of soluble APP peptides, S-APP-alpha and S-APP-beta, respectively, and the retention of corresponding membrane-anchored C-terminal fragments, C83 and C99. Subsequent processing of C83 by gamma-secretase yields p3 peptides. This is the major secretory pathway and is nonamyloidogenic. Alternatively, presenilin/nicastrin-mediated gamma-secretase processing of C99 releases the amyloid beta proteins, amyloid-beta 40 (Abeta40) and amyloid-beta 42 (Abeta42), major components of amyloid plaques, and the cytotoxic C-terminal fragments, gamma-CTF(50), gamma-CTF(57) and gamma-CTF(59) (By similarity).

-1- PTM: Proteolytically cleaved by caspases during neuronal apoptosis (By similarity). Cleavage at Asp-720 by either caspase-3, -8 or -9 results in the production of the neurotoxic C31 peptide and the increased production of beta-amyloid peptides (By similarity).

-1- PTM: N- and O-glycosylated (By similarity).

-1- PTM: Phosphorylation in the C-terminal on tyrosine, threonine and serine residues is neuron-specific. Phosphorylation can affect APP processing, neuronal differentiation and interaction with other

proteins (By similarity).

-1- MISCELLANEOUS: Chelation of metal ions, notably copper, iron and zinc, can induce histidine-bridging between beta-amyloid molecules resulting in beta-amyloid-metal aggregates (By similarity).

CC Extracellular zinc-binding increases binding of heparin to APP and inhibits collagen-binding (By similarity).

CC **-1- SIMILARITY:** Belongs to the APP family.

CC **-1- SIMILARITY:** Contains 1 BPTI/Kuntz inhibitor domain.

CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see [http://www.isb-sib.ch/announce/](http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch) or send an email to license@isb-sib.ch).

DR EMBL; S81024; AAD14347.1; .

DR HSSP; P08592; INMU.

DR InterPro; IPR008155; A4_APP.

DR InterPro; IPR008154; A4_extra.

DR InterPro; IPR001255; Beta_APP.

DR InterPro; IPR002223; Prot_inh_Kunz-m.

DR Pfam; PF02177; A4_EXTRA; 1.

DR Pfam; PF03494; Beta_APP; 1.

DR Pfam; PF00014; Kuntz_BPTI; 1.

DR PRINTS; PR00203; AMYLOIDA4.

DR PRINTS; PR00759; BASICTPASE.

DR PRINTS; PR00204; BETAMYLOID.

DR ProDom; PD000222; Kuntz_BPTI; 1.

DR SMART; SM00006; A4_EXTRA; 1.

DR SMART; SM00031; KU; 1.

DR PROSITE; PS00319; A4_EXTRA; 1.

DR PROSITE; PS00320; A4_INTRA; 1.

DR PROSITE; PS00280; BPTI_KUNTZ_1; 1.

DR PROSITE; PS00280; BPTI_KUNTZ_2; 1.

DR PROSITE; PS50279; BPTI_KUNTZ_2; 1.

KM Alternative splicing; Amyloid; Apoptosis; Cell adhesion; Coated pits; Copper; Endocytosis; Glycoprotein; Heparin-binding; Iron; Metal-binding; Phosphorylation; Proteoglycan;

KM Metal-binding; Phosphorylation; Proteoglycan;

KM Serine protease inhibitor; Signal; Transmembrane; Zinc.

FT SIGNAL 1 17

FT CHAIN 1 751

FT CHAIN 18 668

FT CHAIN 18 652

FT CHAIN 653 751

FT CHAIN 653 694

FT CHAIN 653 692

FT CHAIN 669 751

FT CHAIN 669 694

FT CHAIN 669 692

FT CHAIN 693 751

FT CHAIN 693 751

FT CHAIN 702 751

FT CHAIN 721 751

FT CHAIN 721 751

FT TRANSMEM 18 680

FT DOMAIN 681 704

FT DOMAIN 705 751

FT DOMAIN 96 110

FT DOMAIN 181 188

FT DOMAIN 291 341

FT DOMAIN 316 344

FT DOMAIN 363 428

FT DOMAIN 504 521

FT DOMAIN 713 732

FT DOMAIN 230 260

FT DOMAIN 274 280

FT SITE 144 144

FT SITE 301 302

FT SITE 652 653

FT SITE 653 654

CC Amyloid beta A4 protein.

CC Soluble APP-alpha (Potential).

CC Soluble APP-beta (Potential).

CC C99 (Potential).

CC Beta-amyloid protein 42 (Potential).

CC Beta-amyloid protein 40 (Potential).

CC C83 (Potential).

CC P3(42) (Potential).

CC P3(40) (Potential).

CC Gamma-CTF(59) (Potential).

CC Gamma-CTF(57) (Potential).

CC Gamma-CTF(50) (Potential).

CC C31 (Potential).

CC Extracellular (Potential).

CC Potential.

CC Cytoplasmic (Potential).

CC Heparin-binding (By similarity).

CC ZINC-BINDING (By similarity).

CC BPTI/Kuntz inhibitor.

CC Heparin-binding (By similarity).

CC Heparin-binding (By similarity).

CC Collagen-binding (By similarity).

CC Interaction with G(c)-alpha (By similarity).

CC Asp/Glu-rich (acidic).

CC Poly-Thr.

CC Required for copper(II) reduction (By similarity).

CC Reactive bond.

CC Cleavage (by beta-secretase) (By similarity).

CC Cleavage (by caspase-6) (By similarity).

```
FT SITE 668 669 Cleavage (by alpha-secretase) (By
FT SITE 685 685 similarity)
FT SITE 687 687 Involved in free radical propagation (By
FT SITE 687 687 similarity)
FT SITE 692 693 Involved in oxidative reactions (By
FT SITE 692 693 similarity)
FT SITE 694 695 Cleavage (by gamma-secretase; site 1) (By
FT SITE 694 695 similarity)
FT SITE 701 702 Cleavage (by gamma-secretase; site 2) (By
FT SITE 701 702 similarity)
FT SITE 705 715 Cleavage (by gamma-secretase; site 3) (By
FT SITE 705 715 similarity)
FT SITE 720 721 Basolateral sorting signal (By
FT SITE 720 721 similarity)
FT SITE 738 741 Cleavage (by caspases-3, -6, -8 or -9)
FT SITE 738 741 (By similarity)
FT SITE 738 741 Endocytosis signal.

Query Match 96.3%; Score 210; DB 1; Length 751;
Best Local Similarity 97.6%; Pred. No. 1,1e-18;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVSNKGAIIGLMVGGVVIA 42
Db 653 DAEFRHDSGYEVHHQKLVFPAGDVSNKGAIIGLMVGGVVIA 694

RESULT 14
Q6RH28 PRELIMINARY; PRT; 751 AA.
AC Q6RH28;
DT 05-JUL-2004 (TREMBlurel. 27, Created)
DT 05-JUL-2004 (TREMBlurel. 27, Last sequence update)
DT 05-JUL-2004 (TREMBlurel. 27, Last annotation update)
DE Beta amyloid protein isoform APP751.
GN Name=Beta APP;
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX NCBI_TaxID=9615;
RN [1]
RP SEQUENCE FROM N.A.
RA Nakata M.;
RL Submitted (DEC-2003) to the EMBL/GenBank/DBJ databases.
CC -1- SIMILARITY: Contains 1 BPTI/Kunitz inhibitor domain.
DR EMBL; AY98708; AAR9728.1; -.
DR InterPro; IPR008155; A4_APP.
DR InterPro; IPR008154; A4-extra.
DR InterPro; IPR001255; Beta-APP.
DR InterPro; IPR002223; Prot_Inh_Kunz-m.
DR Pfam; PF02177; A4_EXTRA; 1.
DR Pfam; PF03494; Beta-APP; 1.
DR Pfam; PF00014; Kunitz_BPTI; 1.
DR PRINTS; PR00203; AMYLOIDA4.
DR PRINTS; PR00759; BASICTPASE.
DR PRINTS; PR00204; BETAAMYLOID.
DR ProDom; PD000222; Prot_Inh_Kunz-m; 1.
DR SMART; SM00006; A4_EXTRA; 1.
DR SMART; SM00011; KU; 1.
DR PROSITE; PS00319; A4_EXTRA; 1.
DR PROSITE; PS00320; A4_INTRA; 1.
DR PROSITE; PS00280; BPTI_KUNITZ_1; 1.
DR PROSITE; PS50279; BPTI_KUNITZ_2; 1.
SQ SEQUENCE 751 AA; 84832 MW; 7541A947B46DA5A4 CRC64;

Query Match 96.3%; Score 210; DB 2; Length 751;
Best Local Similarity 97.6%; Pred. No. 1,1e-18;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVSNKGAIIGLMVGGVVIA 42
Db 653 DAEFRHDSGYEVHHQKLVFPAGDVSNKGAIIGLMVGGVVIA 694
```

```
RESULT 15
Q9DGJ7 PRELIMINARY; PRT; 751 AA.
ID Q9DGJ7;
AC Q9DGJ7;
DT 01-MAR-2001 (TREMBlurel. 16, Created)
DT 01-MAR-2001 (TREMBlurel. 16, Last sequence update)
DT 01-MAR-2001 (TREMBlurel. 26, Last annotation update)
DE Beta-amyloid protein 751 isoform.
GN Gallus gallus (Chicken).
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC Gallus.
OX NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RA Saraea M., Rodolose A., Sorribas V.;
RL Submitted (JUL-2000) to the EMBL/GenBank/DBJ databases.
CC -1- SIMILARITY: Contains 1 BPTI/Kunitz inhibitor domain.
DR EMBL; AF289219; AAG00594.1; -.
DR HSP; P08592; IMUJ.
DR GO; GO:0016021; C:integral to membrane; IEA.
DR GO; GO:0005488; F:binding; IEA.
DR GO; GO:0004687; F:serine-type endopeptidase inhibitor activity; IEA.
DR InterPro; IPR008155; A4_APP.
DR InterPro; IPR008154; A4-extra.
DR InterPro; IPR001255; Beta-APP.
DR InterPro; IPR002223; Prot_Inh_Kunz-m.
DR Pfam; PF02177; A4_EXTRA; 1.
DR Pfam; PF03494; Beta-APP; 1.
DR Pfam; PF00014; Kunitz_BPTI; 1.
DR PRINTS; PR00203; AMYLOIDA4.
DR PRINTS; PR00759; BASICTPASE.
DR PRINTS; PR00204; BETAAMYLOID.
DR ProDom; PD000222; Prot_Inh_Kunz-m; 1.
DR SMART; SM00006; A4_EXTRA; 1.
DR SMART; SM00011; KU; 1.
DR PROSITE; PS00319; A4_EXTRA; 1.
DR PROSITE; PS00320; A4_INTRA; 1.
DR PROSITE; PS00280; BPTI_KUNITZ_1; 1.
DR PROSITE; PS50279; BPTI_KUNITZ_2; 1.
SQ SEQUENCE 751 AA; 84705 MW; E78B9413A8033D84 CRC64;

Query Match 96.3%; Score 210; DB 2; Length 751;
Best Local Similarity 97.6%; Pred. No. 1,1e-18;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVSNKGAIIGLMVGGVVIA 42
Db 653 DAEFRHDSGYEVHHQKLVFPAGDVSNKGAIIGLMVGGVVIA 694
```

Search completed: November 19, 2004, 15:54:39
Job time : 198 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: November 19, 2004, 15:48:46 ; Search time 38 Seconds
(without alignments)
73.299 Million cell updates/sec

Title: US-09-899-815-1

Perfect score: 218
Sequence: 1 DAEFRHDSGVGVNHQKLVFF.....DVGSNKGAIIIGLVGVVIA 42

Scoring table:

Gapop 10.0 , Gapext 0.5

Searched: 478139 seqs, 66318000 residues

Total number of hits satisfying chosen parameters: 478139

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :

1: Issued Patents AA:*
2: /cgn2_6/ptodata/1/iaa/5A COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/5B COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6A COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/6B COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/PTCUS COMB.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	218	100.0	43	3	US-08-339-141A-1
2	218	100.0	43	5	PCT-US95-14659-1
3	210	96.3	42	1	US-07-744-767A-2
4	210	96.3	42	1	US-08-179-574-1
5	210	96.3	42	1	US-08-347-144-1
6	210	96.3	42	1	US-08-462-859A-19
7	210	96.3	42	1	US-08-123-659A-19
8	210	96.3	42	1	US-08-464-247A-19
9	210	96.3	42	1	US-08-464-248A-19
10	210	96.3	42	1	US-08-476-464A-1
11	210	96.3	42	1	US-08-304-585-2
12	210	96.3	42	1	US-08-302-808-5
13	210	96.3	42	1	US-08-268-348A-1
14	210	96.3	42	2	US-08-433-734-2
15	210	96.3	42	2	US-08-609-090-9
16	210	96.3	42	2	US-07-737-371E-72
17	210	96.3	42	2	US-08-422-333-4
18	210	96.3	42	2	US-08-682-245A-4
19	210	96.3	42	2	US-08-986-948-5
20	210	96.3	42	3	US-08-717-551A-2
21	210	96.3	42	3	US-09-388-890-1
22	210	96.3	42	3	US-09-005-215-20
23	210	96.3	42	3	US-09-242-724-23
24	210	96.3	42	4	US-08-922-930-2
25	210	96.3	42	4	US-09-660-954-1
26	210	96.3	42	4	US-08-923-055-2
27	210	96.3	42	4	US-08-922-889-2

28	210	96.3	42	4	US-09-731-460-1	Sequence 1, Appli
29	210	96.3	42	4	US-09-133-866-2	Sequence 2, Appli
30	210	96.3	42	4	US-09-723-384-1	Sequence 1, Appli
31	210	96.3	42	4	US-09-724-961-42	Sequence 42, Appli
32	210	96.3	42	4	US-09-724-552-1	Sequence 1, Appli
33	210	96.3	42	4	US-09-580-018-42	Sequence 42, Appli
34	210	96.3	42	4	US-10-455-218-2	Sequence 2, Appli
35	210	96.3	42	4	US-09-723-927-1	Sequence 1, Appli
36	210	96.3	42	4	US-09-724-489-1	Sequence 1, Appli
37	210	96.3	42	4	US-09-724-477-1	Sequence 1, Appli
38	210	96.3	42	4	US-09-723-762-1	Sequence 1, Appli
39	210	96.3	42	4	US-09-201-430-1	Sequence 1, Appli
40	210	96.3	42	4	US-09-724-551-42	Sequence 42, Appli
41	210	96.3	42	5	PCT-US95-06700-2	Sequence 2, Appli
42	210	96.3	42	5	PCT-US95-00325-1	Sequence 1, Appli
43	210	96.3	43	1	US-08-235-400-1	Sequence 1, Appli
44	210	96.3	43	1	US-08-437-067-1	Sequence 1, Appli
45	210	96.3	43	1	US-08-302-808-6	Sequence 6, Appli

ALIGNMENTS

RESULT 1
US-08-339-141A-1
Sequence 1, Application US/08339141A
Patent No. 614133
GENERAL INFORMATION:
APPLICANT: Seubert, Peter A.
APPLICANT: Vingo-Pelfrey, Carmen
APPLICANT: Schenk, Dale B.
APPLICANT: Barbour, Robin
TITLE OF INVENTION: Methods for Aiding in the Diagnosis of
TITLE OF INVENTION: Alzheimer's Disease by Measuring Amyloid-Beta Peptide
TITLE OF INVENTION: (x>+11)
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend Kourie and Crew
STREET: One Market Plaza, Stewart Tower, Suite 2000
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/339,141A
FILING DATE: 14-NOV-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Storella, John R.
REGISTRATION NUMBER: 32,944
REFERENCE/DOCKET NUMBER: 15270-21
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2422
TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 43 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-339-141A-1
Query Match 100.0%; Score 218; DB 3; Length 43;
Best local Similarity 100.0%; Pred. No. 7.3e-25;
Matches 42; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 DAEFRHDSGVGVNHQKLVFFADVGSNKGAIIIGLVGVVIA 42

Db 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGVVIA 42

RESULT 2
PCT-US95-14659-1

Sequence 1, Application PC/TUS9514659
GENERAL INFORMATION:
APPLICANT: Seubert, Peter A.
APPLICANT: Vigo-Pelfrey, Carmen
APPLICANT: Schenk, Dale B.
APPLICANT: Barbour, Robin
TITLE OF INVENTION: Methods for Aiding in the diagnosis of
TITLE OF INVENTION: Alzheimer's Disease by Measuring Amyloid-Beta Peptide
TITLE OF INVENTION: (x->41) And Tau
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend Hourie and Crew
STREET: One Market Plaza, Stewart Tower, Suite 2000
CITY: San Francisco
STATE: California
COUNTRY: USA
ZIP: 94105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/14659
FILING DATE: April 7, 1995
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Heald, James M.
REGISTRATION NUMBER: 29,541
REFERENCE/DOCKET NUMBER: 15270-002110
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 43 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
PCT-US95-14659-1

Query Match 100.0%; Score 218; DB 5; Length 43;
Best Local Similarity 100.0%; Pred. No. 7.3e-25;
Matches 42; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGVVIA 42
Db 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGVVIA 42

RESULT 3
US-07-744-767A-2

Sequence 2, Application US/07744767A
Patent No. 5434050
GENERAL INFORMATION:
APPLICANT: Maggio, John E.
APPLICANT: Mantyh, Patrick W.
TITLE OF INVENTION: Labeled - Amyloid Peptide and Methods
TITLE OF INVENTION: for Use in Detecting Alzheimer's Disease
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSEE: Schwegman, Lundberg & Moessner, P.A.
STREET: 3500 IDS Center
CITY: Minneapolis
STATE: MN
COUNTRY: USA

ZIP: 55402

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/744,767A
FILING DATE: 13-AUG-1991
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Mueeling, Ann M.
REGISTRATION NUMBER: 33,977
REFERENCE/DOCKET NUMBER: 600.226-US-01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-339-0331
TELEFAX: 612-339-3061
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-07-744-767A-2

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGVVIA 42
Db 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIIGLMVGVVIA 42

RESULT 4
US-08-179-574-1

Sequence 1, Application US/08179574
Patent No. 5506097
GENERAL INFORMATION:
APPLICANT: Huntington Potter
APPLICANT: Usamah Kayyali
TITLE OF INVENTION: Compounds and Methods for Inhibiting
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
STREET: Two Millitia Drive
CITY: Lexington
STATE: Massachusetts
COUNTRY: U.S.A.
ZIP: 02173
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/179,574
FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/819,361
FILING DATE: 13-JAN-1992
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: HU90-03A3
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-861-6240
TELEFAX: 617-861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid

TOPOLOGY: linear
US-08-179-574-1

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAERFHDGVEVHHQKLVFPAGDVGSNKGAIIGLMVGAVIA 42
DB 1 DAERFHDGVEVHHQKLVFPAGDVGSNKGAIIGLMVGAVIA 42

RESULT 5
US-08-347-144-1

Sequence 1, Application US/08347144

Patent No. 5589154

GENERAL INFORMATION:

APPLICANT: ANDERSON, STEPHEN

TITLE OF INVENTION: METHODS FOR THE PREVENTION AND TREATMENT

TITLE OF INVENTION: OF VASCULAR HEMORRHAGING AND ALZHEIMER'S DISEASE

NUMBER OF SEQUENCES: 1

CORRESPONDENCE ADDRESS:

ADDRESSEE: HOWREY & SIMON

STREET: 1299 PENNSYLVANIA AVENUE, N.W.

CITY: WASHINGTON

STATE: D.C.

COUNTRY: US

ZIP: 20004

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/347,144

FILING DATE:

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: AUERBACH, JEFFREY I.

REGISTRATION NUMBER: 32,680

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202) 383-7451

TELEFAX: (202) 383-6610

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 42 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: peptide

HYPOTHEICAL: NO

FRAGMENT TYPE: N-terminal

ORIGINAL SOURCE:

ORGANISM: AMYLOID PEPTIDE

US-08-347-144-1

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAERFHDGVEVHHQKLVFPAGDVGSNKGAIIGLMVGAVIA 42
DB 1 DAERFHDGVEVHHQKLVFPAGDVGSNKGAIIGLMVGAVIA 42

RESULT 6
US-08-462-859A-19

Sequence 19, Application US/08462859A

Patent No. 5652092

GENERAL INFORMATION:

APPLICANT: Jacobsen, J. S.

APPLICANT: Vittek, M. P.

TITLE OF INVENTION: No. 5652092el Amyloid Precursor and Method of

TITLE OF INVENTION: Using Same to Access Agents Which Down-Regulate Formation

TITLE OF INVENTION: of B-Amyloid Peptide

NUMBER OF SEQUENCES: 19

CORRESPONDENCE ADDRESS:

ADDRESSEE: American Cyanamid Company

STREET: One Cyanamid Plaza

CITY: Wayne

STATE: New Jersey

COUNTRY: United States

ZIP: 07470-8426

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/462,859A

FILING DATE: 05-JUN-1995

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Barnhard, Elizabeth M.

REGISTRATION NUMBER: 31,088

REFERENCE/DOCKET NUMBER: 31,844-04

TELECOMMUNICATION INFORMATION:

TELEPHONE: (201)831-3246

TELEFAX: (201)831-3305

INFORMATION FOR SEQ ID NO: 19:

SEQUENCE CHARACTERISTICS:

LENGTH: 42 amino acids

TYPE: amino acid

STRANDEDNESS:

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-462-859A-19

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAERFHDGVEVHHQKLVFPAGDVGSNKGAIIGLMVGAVIA 42
DB 1 DAERFHDGVEVHHQKLVFPAGDVGSNKGAIIGLMVGAVIA 42

RESULT 7
US-08-123-659A-19

Sequence 19, Application US/08123659A

Patent No. 5656477

GENERAL INFORMATION:

APPLICANT: Jacobsen, J. S.

TITLE OF INVENTION: No. 5656477el Amyloid Precursor and Method of

TITLE OF INVENTION: Using Same to Access Agents Which Down-Regulate Formation

TITLE OF INVENTION: of B-Amyloid Peptide

NUMBER OF SEQUENCES: 19

CORRESPONDENCE ADDRESS:

ADDRESSEE: Anne Rosenblum

STREET: 163 Delaware Avenue, Suite 212

CITY: Delmar

STATE: New York

COUNTRY: U.S.A.

ZIP: 12054

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/123,659A

FILING DATE: 20-SEP-1993

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Rosenblum, Anne M.

REGISTRATION NUMBER: 30,419

REFERENCE/DOCKET NUMBER: 31,844-01
TELECOMMUNICATION INFORMATION:
TELEPHONE: (518)475-0611
TELEFAX: (518)475-0619
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-123-659A-19

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMVGCVIA 42
DB 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMVGCVIA 42

RESULT 8
US-08-464-247A-19
Sequence 19, Application US/08464247A
Patent No. 5693478
GENERAL INFORMATION:
APPLICANT: Jacobsen, J. S.
TITLE OF INVENTION: No. 5693478el Amyloid Precursor and Method of
TITLE OF INVENTION: Using Same to Access Agents Which Down-Regulate Formation
TITLE OF INVENTION: of B-Amyloid Peptide
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: American Cyanamid Company
STREET: One Campus Drive
CITY: Parsippany
STATE: New Jersey
COUNTRY: United States
ZIP: 07054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/464,247A
FILING DATE: 05-JUN-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Barnhard, Elizabeth M.
REGISTRATION NUMBER: 31,088
REFERENCE/DOCKET NUMBER: 31,844-03
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-683-2158
TELEFAX: 201-683-4117
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-464-247A-19

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMVGCVIA 42
DB 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMVGCVIA 42

RESULT 9
US-08-464-248A-19
Sequence 19, Application US/08464248A
Patent No. 5703209
GENERAL INFORMATION:
APPLICANT: Jacobsen, J. S.
TITLE OF INVENTION: No. 5703209el Amyloid Precursor and Method of
TITLE OF INVENTION: Using Same to Access Agents Which Down-Regulate Formation
TITLE OF INVENTION: of B-Amyloid Peptide
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: American Cyanamid Company
STREET: One Cyanamid Plaza
CITY: Wayne
STATE: New Jersey
COUNTRY: United States
ZIP: 07470-8426
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/464,248A
FILING DATE: 05-JUN-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Barnhard, Elizabeth M.
REGISTRATION NUMBER: 31,088
REFERENCE/DOCKET NUMBER: 31,844-02
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201)831-3246
TELEFAX: (201)831-3305
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-464-248A-19

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMVGCVIA 42
DB 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMVGCVIA 42

RESULT 10
US-08-476-464A-1
Sequence 1, Application US/08476464A
Patent No. 5707821
GENERAL INFORMATION:
APPLICANT: RYDEL, RUSSELL E.
TITLE OF INVENTION: THERAPEUTIC INHIBITION OF PHOSPHOLIPASE
TITLE OF INVENTION: A2 IN A-BETA PEPTIDE-MEDIATED NEURODEGENERATIVE DISEASE
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND & TOWNSEND & CREW LLP
STREET: TWO EMBARCADERO CENTER, 8TH FLOOR
CITY: SAN FRANCISCO
STATE: CALIFORNIA
COUNTRY: U.S.A.
ZIP: 94111-3834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/476,464A
FILING DATE: 07-JUN-1995
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: STORELLA, JOHN R.
REGISTRATION NUMBER: 32,944
REFERENCE/DOCKET NUMBER: 15270-002300
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415)326-2400
TELEFAX: (415)576-0300
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-476-464A-1

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 DAEFRHDSGYEVHHQKLVFPAGDVGNKGAIIIGLMVGVVIA 42
DB 1 DAEFRHDSGYEVHHQKLVFPAGDVGNKGAIIIGLMVGVVIA 42

RESULT 11

US-08-304-585-2
Sequence 2, Application US/08304585
Patent No. 5721106
GENERAL INFORMATION:
APPLICANT: Magglio, John E.
APPLICANT: Maneyh, Patrick W.
TITLE OF INVENTION: LABELLED BETA-AMYLOID PEPTIDE AND
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Mueeling, Raesach, Gebhardt & Schwappach, P.A.
STREET: P.O. Box 581415
CITY: Minneapolis
STATE: MN
COUNTRY: USA
ZIP: 55458-1415
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/304,585
FILING DATE: 12-SEP-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Mueeling, Ann M.
REGISTRATION NUMBER: 33,977
REFERENCE/DOCKET NUMBER: 110,00010120
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-305-1217
TELEFAX: 612-305-1228
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid
STRANDEDNESS: not relevant
TOPOLOGY: not relevant
MOLECULE TYPE: peptide
US-08-304-585-2

Query Match 96.3%; Score 210; DB 1; Length 42;

Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 DAEFRHDSGYEVHHQKLVFPAGDVGNKGAIIIGLMVGVVIA 42
DB 1 DAEFRHDSGYEVHHQKLVFPAGDVGNKGAIIIGLMVGVVIA 42

RESULT 12

US-08-302-808-5
Sequence 5, Application US/08302808
Patent No. 5750349
GENERAL INFORMATION:
APPLICANT: SUZUKI, No. 5750349uhiro
APPLICANT: ODARA, Asano
APPLICANT: KITADA, Chieko
TITLE OF INVENTION: ANTIBODIES TO B-AMYLOIDS OR THEIR
DERIVATIVES AND USE THEREOF
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: DIKE, BRONSTEIN, ROBERTS & CUSHMAN
STREET: 130 WATER STREET
CITY: BOSTON
STATE: MA
COUNTRY: USA
ZIP: 02019
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
OPERATING SYSTEM: DOS
SOFTWARE: FastSeq Version 1.5
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/302,808
FILING DATE: 15-SEP-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/JP94/00089
FILING DATE: 24-JAN-1994
APPLICATION NUMBER: 010132/1993
FILING DATE: 25-JAN-1993
APPLICATION NUMBER: 019035/1993
FILING DATE: 05-FEB-1993
APPLICATION NUMBER: 286985/1993
FILING DATE: 16-NOV-1993
APPLICATION NUMBER: 334773/1993
FILING DATE: 28-DEC-1993
ATTORNEY/AGENT INFORMATION:
NAME: DAVID, RESNICK S
REGISTRATION NUMBER: 34,235
REFERENCE/DOCKET NUMBER: 44631
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-523-3400
TELEFAX: 617-523-6440
TELEX: 200291 STRR
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
US-08-302-808-5

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 DAEFRHDSGYEVHHQKLVFPAGDVGNKGAIIIGLMVGVVIA 42

Db 1 DAEFRHDSGYEVHOKLVFPAEDVGSNKGAIIIGLMVGAVIA 42

RESULT 13
US-08-268-348A-1
Sequence 1, Application US/08268348A
Patent No. 5750374
GENERAL INFORMATION:
APPLICANT: Dobell, Heinz
APPLICANT: Draeger, Nicholas
APPLICANT: Trotterman, Gerda H
APPLICANT: Jakob, Peter
APPLICANT: Studer, Dietrich
TITLE OF INVENTION: Process for Producing Hydrophobic
TITLE OF INVENTION: Polypeptides and Proteins, and Fusion Proteins for Use in
TITLE OF INVENTION: Producing Same
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingeland Street
City: Nutley
STATE: New Jersey
COUNTRY: U.S.A.
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/268,348A
FILING DATE: 29-JUN-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 93110755.1
FILING DATE: 06-JUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: Parise, John P.
REGISTRATION NUMBER: 34,403
REFERENCE/DOCKET NUMBER: 4105/157
TELECOMMUNICATION INFORMATION:
TELEPHONE: (201) 235-6326
TELEFAX: (201) 235-3500
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
FRAGMENT TYPE: N-terminal
US-08-268-348A-1

Query Match 96.3%; Score 210; DB 1; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAEFRHDSGYEVHOKLVFPAEDVGSNKGAIIIGLMVGAVIA 42
Db 1 DAEFRHDSGYEVHOKLVFPAEDVGSNKGAIIIGLMVGAVIA 42

RESULT 14
US-08-433-734-2
Sequence 2, Application US/08433734
Patent No. 5837473
GENERAL INFORMATION:
APPLICANT: Maggio, John E.
APPLICANT: Mantyh, Patrick W.
TITLE OF INVENTION: Labelled - Amyloid Peptide and Methods
TITLE OF INVENTION: for Use in Detecting Alzheimer's Disease
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
ADDRESSEE: Mueling, Raasch, Gebhardt & Schwappach, P.A.

STREET: P.O. Box 581415
City: Minneapolis
STATE: MN
COUNTRY: USA
ZIP: 55458-1415
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/433,734
FILING DATE: 03-MAY-1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Mueling, Ann M.
REGISTRATION NUMBER: 33,977
REFERENCE/DOCKET NUMBER: 110.00010102
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-305-1220
TELEFAX: 612-305-1228
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-433-734-2

Query Match 96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 DAEFRHDSGYEVHOKLVFPAEDVGSNKGAIIIGLMVGAVIA 42
Db 1 DAEFRHDSGYEVHOKLVFPAEDVGSNKGAIIIGLMVGAVIA 42

RESULT 15
US-08-609-090-9
Sequence 9, Application US/08609090
Patent No. 5840838
GENERAL INFORMATION:
APPLICANT: HENSLEY, Kenneth
APPLICANT: BUTTERFIELD, D. A.
APPLICANT: CARNEY, John M.
APPLICANT: AKSENOV, Michael
TITLE OF INVENTION: A PROCESS FOR ENHANCING THE ACTIVITY OF
TITLE OF INVENTION: AN OLIGOPEPTIDE OR POLYPEPTIDES
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: LOWE PRICE LEBLANC & BECKER
STREET: 99 Canal Center Plaza, Suite 300
City: Alexandria
STATE: Virginia
COUNTRY: USA
ZIP: 22314
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/609,090
FILING DATE: 29-FEB-1996
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Kraus, Eric J.
REGISTRATION NUMBER: 36,190
REFERENCE/DOCKET NUMBER: 434-059
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-684-1111
TELEFAX: 703-684-1124

```

; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 42 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-609-090-9

```

```

Query Match      96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 1e-23;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY      1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGALIGLMVGSVVA 42
Db      1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGALIGLMVGSVVA 42

```

Search completed: November 19, 2004, 16:04:03
 Job time : 44 secs

CC This invention relates to the use of a non-wild type protofibril or
 CC compound(s) with protofibril forming ability for immunisation of
 CC individuals and prevention or treatment of Alzheimer's disease. The
 CC protofibril compound of the invention is useful for preventing or
 CC treating Alzheimer's disease. A compound with protofibril forming ability
 CC is useful for high throughput screening to find substances with anti-
 CC protofibril activity. A peptide, amyloid-beta (A-beta)-Arc is useful for
 CC pharmaceutical, diagnostic or research purposes. Amyloid beta peptide is
 CC a cleavage product of the amyloid precursor protein (APP), the A-beta
 CC peptide can aggregate to form amyloid plaques that are hallmarks of
 CC Alzheimer's disease. A-beta-Arc is an A-beta peptide containing the Arctic
 CC mutation (Glu-Gly at position 22 of the peptide). A host cell comprising
 CC a vector encoding (A-beta)-Arc is useful to produce the recombinant
 CC peptide. A transgenic, non-human animal expressing this peptide may be
 CC useful for pharmaceutical screening and in disease models for
 CC neurodegenerative diseases and amyloid precursor protein biochemistry.
 CC Antibodies are useful for vaccination for the prevention and treatment of
 CC Alzheimer's disease. The (A-beta)-Arc peptide has enhanced protofibril
 CC forming ability, and/or enhanced immunogenicity compared to the wild-type
 CC counterpart. The present sequence represents the (A-beta)-Arc peptide of
 CC the invention

XX Sequence 42 AA;

Query Match 100.0%; Score 218; DB 5; Length 42;
 Best Local Similarity 100.0%; Pred. No. 4.6e-23;
 Matches 42; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMWGVVIA 42
 DB 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMWGVVIA 42

RESULT 2
 ID ABP97889 standard; peptide; 42 AA.

XX ABP97889;

DT 03-JUN-2003 (first entry)

DE Amino acid sequence of human 22G-A-beta1-42 (Arctic) mutant peptide.

XX Amyloid precursor protein; A-beta peptide; angiogenesis; psoriasis;
 XX angiogenesis-mediated disease; cancer; arthritis; atherosclerosis;
 XX macular degeneration; diabetic retinopathy; Alzheimer's disease;
 XX cerebral amyloid angiopathy; cerebrovascular disease; brain injury.

OS Homo sapiens.

XX MO2003014329-A2.

XX 20-FEB-2003.

XX 12-AUG-2002, 2002MO-US027040.

XX 10-AUG-2001, 2001US-031156P.

XX (USF-) UNIV SOUTH FLORIDA.

XX Paris D, Mullian M;

XX WPI; 2003-256578/25.

PT Inhibiting angiogenesis, and preventing or alleviating the symptoms of an
 PT angiogenesis-mediated disease, e.g. cancer, arthritis or atherosclerosis,
 PT comprises increasing in vivo concentrations of an A-beta peptide in the
 PT patient.

PS Claim 3; Page 13; 85pp; English.

XX The present sequence represents a peptide derived from amyloid precursor
 CC protein, and designated 22G-A-beta1-42 (Arctic) mutant peptide. A-beta

CC peptides are used in the method of the invention. The specification
 CC describes a method of inhibiting angiogenesis, and preventing or
 CC alleviating the symptoms of an angiogenesis-mediated disease in a
 CC patient. The method comprises increasing in vivo concentrations of an A-
 CC beta peptide within the patient. The A-beta peptides are useful for
 CC preventing or alleviating angiogenesis-mediated diseases such as cancer,
 CC arthritis, atherosclerosis, psoriasis, macular degeneration and diabetic
 CC retinopathy. A-beta peptide antagonists may be used to treat Alzheimer's
 CC disease, cerebral amyloid angiopathy, cerebrovascular disease in the
 CC presence of Alzheimer's disease, or traumatic brain injury

XX Sequence 42 AA;

Query Match 100.0%; Score 218; DB 6; Length 42;
 Best Local Similarity 100.0%; Pred. No. 4.6e-23;
 Matches 42; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMWGVVIA 42
 DB 1 DAEFRHDSGYEVHHQKLVFPAGDVGSNKGAIIGLMWGVVIA 42

RESULT 3
 ID AAR20330 standard; peptide; 42 AA.

XX AAR20330;

DT 25-MAR-2003 (revised)

DT 14-APR-1992 (first entry)

DE Sequence of A99 (beta-amyloid core domain).

XX Transgenic mice; Alzheimer's disease; diagnosis; beta-amyloid precursor;
 XX plaque core protein.

OS Homo sapiens.

XX MO9119810-A.

XX 26-DEC-1991.

XX 15-JUN-1990; 90US-00538857.

XX 15-JUN-1990; 90US-00538857.

XX 17-JUN-1991; 91US-00716725.

XX (CALD) CALIFORNIA BIOTECHNOLOGY INC.

XX Cordell B;

XX WPI; 1992-024426/03.

PT Transgenic mice as models for studying Alzheimer's disease proteins -
 PT contg. cells with promoter and beta-amyloid precursor protein
 PT deoxyribonucleic acid, useful for testing anti-Alzheimer's drugs.
 XX Disclosure; Fig 3; 98pp; English.

XX The inventors specifically claim transgenic mice contg. DNA encoding A42
 CC (beta-amyloid precursor protein) (AAR20330), A99 (beta-amyloid carboxy
 CC tail) (AAR20329), A695 (beta-amyloid precursor protein), A751 (precursor
 CC plus inhibitor) or A41 (protease inhibitor) (AAR20328). Human fibroblast
 CC CDNA clone lambdaPAP16814 was deposited at ATCC on July 1, 1987 and has
 CC accession No. 40347. The promoter is pref. the NSB promoter with the A751
 CC or the A695 sequence. (Updated on 25-MAR-2003 to correct PR field.)
 CC (Updated on 25-MAR-2003 to correct PA field.)

XX Sequence 42 AA;

Query Match 96.3%; Score 210; DB 2; Length 42;
 Best Local Similarity 97.6%; Pred. No. 6.1e-22;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

QY      1 DAEFRHDSGYEVHHQKLVFPAGDVSNKGATIGLMGVVIA 42
      |||
DB      1 DAEFRHDSGYEVHHQKLVFPAGDVSNKGATIGLMGVVIA 42

RESULT 4
AAR60366
ID      AAR60366 standard; peptide: 42 AA.
XX
AC      AAR60366;
XX
DT      25-MAR-2003 (revised)
DT      15-MAR-1995 (first entry)
XX
DE      Beta-amyloid (1-42).
XX
KW      Amyloid precursor protein; APP; Alzheimer's disease; beta-amyloid;
KM      anti-beta-amyloid antibody; diagnosis.
XX
OS      Homo sapiens.
XX
PN      W09417197-A1.
XX
PD      04-AUG-1994.
XX
PF      24-JAN-1994; 94WO-JP000089.
XX
PR      25-JAN-1993; 93JP-00010132.
PR      05-FEB-1993; 93JP-00019035.
PR      16-NOV-1993; 93JP-00286985.
PR      28-DEC-1993; 93JP-00334773.
XX
PA      (TAKE ) TAKEDA CHEM IND LTD.
XX
PI      Suzuki N, Odaka A, Kitada C;
XX
DR      WPI; 1994-264110/32.
XX
PT      Antibodies recognising specific parts of beta-amyloid - can be used for
PT      diagnosis of diseases implicating beta-amyloid, such as Alzheimer's
XX
XX      disease.
XX
PS      Disclosure; Page 83; 116pp; Japanese.
XX
CC      Antibodies which recognise specific subfragments of the beta-amyloid
CC      protein are claimed. Specifically, the antibodies (which are pref.
CC      monoclonal) recognise residues 1-16 and/or 1-28 from the N-terminal
CC      portion of beta-amyloid or they recognise residues 25-35 or 35-43 from
CC      the C-terminal portion. The antibodies are useful for assaying beta-
CC      amyloid and its derivatives for diagnosis of Alzheimer's disease.
CC      (Updated on 25-MAR-2003 to correct PN field.)
XX
SQ      Sequence 42 AA;

Query Match      96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 6.1e-22;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 DAEFRHDSGYEVHHQKLVFPAGDVSNKGATIGLMGVVIA 42
      |||
DB      1 DAEFRHDSGYEVHHQKLVFPAGDVSNKGATIGLMGVVIA 42

RESULT 5
AAR95248
ID      AAR95248 standard; peptide: 42 AA.
XX
AC      AAR95248;
XX
DT      20-JAN-1997 (first entry)
XX
XX      Beta/A4-amyloid peptide.
DE

```

```

XX      Beta/A4-amyloid peptide; tissue plasminogen activator;
KM      Alzheimer's disease; stimulation; investigation; pathogenesis;
KM      hereditary cerebral haemorrhage with amyloidosis-Dutch type; control;
KM      cerebral amyloid angiopathy; cerebral; haemorrhage; hemorrhage.
XX
OS      Homo sapiens.
XX
PN      W09615799-A1.
XX
PD      30-MAY-1996.
XX
PF      22-NOV-1995; 95WO-US015007.
XX
PR      22-NOV-1994; 94US-00347144.
XX
PA      (RUTP ) UNIV RUTGERS STATE NEW JERSEY.
XX
PI      Anderson S;
XX
DR      WPI; 1996-268332/27.
XX
PT      Use of agents which bind beta-amyloid peptide - for diagnosis, prevention
PT      and treatment of vascular damage caused by amyloid deposits, partic. in
PT      haemorrhaging and Alzheimer's disease.
XX
XX      Example 1; Fig 1; 52pp; English.
XX
CC      To investigate the effects of beta-amyloid peptide (BAP) on tissue
CC      plasminogen activator (t-PA) 3 synthetic peptides were used. One peptide
CC      contained 42 amino acids and corresp. to the full length BAP (AAR95248).
CC      The other 2 peptides (AAR95249 and 50) contained the 28 N-terminal
CC      residues of the BAP found in Alzheimer's disease and hereditary cerebral
CC      haemorrhage with amyloidosis-Dutch type (HCHWA-D), respectively. In an
CC      assay to determine the effect of the peptides on t-PA activation, each
CC      peptide (AAR95248, 49 and 50) gave 1st order rate constant of activation
CC      (kapp) values of 13.4, 13.9 and 14.5, respectively, compared to 1.7 and
CC      7.8 for null and fibrinogen controls. The results demonstrate that the
CC      BAP are able to stimulate t-PA activity in vitro, which is significant in
CC      that it provides a means for investigating and controlling the
CC      pathogenesis of Alzheimer's disease, HCHWA-D and cerebral amyloid
CC      angiopathy related cerebral haemorrhage
XX
SQ      Sequence 42 AA;

Query Match      96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 6.1e-22;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY      1 DAEFRHDSGYEVHHQKLVFPAGDVSNKGATIGLMGVVIA 42
      |||
DB      1 DAEFRHDSGYEVHHQKLVFPAGDVSNKGATIGLMGVVIA 42

RESULT 6
AAR94591
ID      AAR94591 standard; peptide: 42 AA.
XX
AC      AAR94591;
XX
DT      25-MAR-2003 (revised)
DT      21-AUG-1996 (first entry)
XX
DE      Alzheimer amyloid beta-protein active site sequence.
XX
KW      Beta-amyloid; Alzheimer's disease; cholinesterase; lipase; ebelactone-A;
KW      serine protease; para-amidinophenylmethanesulphonyl fluoride; inhibition;
KW      complex formation; alpha(1)-antichymotrypsin; Down's disease; ageing.
XX
OS      Synthetic.
XX
PN      US5506097-A.
XX

```

PD 09-APR-1996.
XX
XX 10-JAN-1994; 94US-00179574.
XX
XX 24-AUG-1990; 90US-00572671.
PR 13-JAN-1992; 92US-00819361.
PR 13-JAN-1993; 93MO-US000325.
XX
XX (HARD) HARVARD COLLEGE.
XX
XX Kayali U, Potter H;
PI WPI; 1996-200270/20.
DR
XX Inhibiting enzymatic activity of Alzheimer amyloid beta-protein - using p
PT -amidino-phenyl-methanesulphonyl fluoride or ebelactone A, for treatment,
PT study and diagnosis of Alzheimer's disease, etc.
XX
XX Disclosure; Fig 1; 17pp; English.
XX
XX This is the sequence of a fragment of the beta-amyloid protein associated
CC with Alzheimer's disease. The protein contains esterase (cholesterase
CC and lipase) activities based on active site similarities with serine
CC proteases (see AAR94592-96). The esterase activity of the beta-amyloid
CC protein is inhibited by the cpds. of the invention i.e. ebelactone A or
CC para-amidinophenylmethanesulphonyl fluoride. Inhibition of these
CC activities prevent complex formation between the beta-amyloid protein and
CC alpha(1)-antichymotrypsin, thus can be used to treat, study or diagnose
CC Alzheimer's or Down's diseases or normal ageing. (Updated on 25-MAR-2003
CC to correct PF field.)
XX
XX Sequence 42 AA;
SQ

Query Match 96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 6,1e-22;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGVIA 42
1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGVIA 42
Db

RESULT 7
AAW12828
ID AAW12828 standard; peptide; 42 AA.
XX
XX AAW12828;
AC
XX 08-DEC-1997 (first entry)
DT
XX
XX Beta A4 peptide.
DE
XX
XX Beta A4 peptide; Alzheimer's disease; peptide aggregation; brain;
KW therapy; inhibitor.
XX
XX Homo sapiens.
OS
XX W09707403-A1.
PN
XX
XX 27-FEB-1997.
PD
XX
XX 23-JUL-1996; 96MO-US012034.
PF
XX
XX 16-AUG-1995; 95US-00515606.
PR
XX
XX (HMRI) HOECHST MARION ROUSSEL INC.
PA
XX
XX Goyal S, Paul J, Riedel NG, Sahaarabudhe SR,
PI WPI; 1997-165447/15.
DR
XX
XX Determn. of the degree of betaA4 peptide aggregation using binding agent
PT - used to screen cpds. for possible use in Alzheimer's disease treatment.

XX
XX Disclosure; Page 10; 18pp; English.
PS
XX
XX This sequence represents the beta A4 peptide. The degree of aggregation
CC of this peptide is determined using the method of the invention. The beta
CC A4 peptide is present in the brain of Alzheimer's disease patients, but
CC not in the brain of non-Alzheimer's disease individuals. The peptide
CC clumps or aggregates in the brain of Alzheimer's disease patients, where
CC it may be responsible for the destruction of normal brain cells. Once the
CC clumps or aggregates form, the formulation is almost irreversible. The
CC method of the invention comprises reacting this sequence with a binding
CC reagent capable of binding to it only in its non-aggregated state, to
CC form an amount of a beta A4 peptide-bound reagent and an amount of
CC protein free reagent. The amount of the beta A4 peptide, binding reagent
CC complex is then measured. Compounds which inhibit aggregation of beta A4
CC peptide are potentially useful for treatment of Alzheimer's disease
XX
XX Sequence 42 AA;
SQ

Query Match 96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 6,1e-22;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGVIA 42
1 DAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIGLMVGVIA 42
Db

RESULT 8
AAW64507
ID AAW64507 standard; peptide; 42 AA.
XX
XX AAW64507;
AC
XX 20-OCT-1998 (first entry)
DT
XX
XX Neurotoxic beta-amyloid peptide decoy peptide #20.
DE
XX
XX Beta-amyloid peptide; beta-AP; neuropeptide; neurotoxin; calcium influx;
KW aggregate; Alzheimers disease; decoy; treatment.
XX
XX Synthetic.
OS
XX W09830229-A1.
PN
XX
XX 16-JUL-1998.
PD
XX
XX 09-JAN-1998; 98MO-US000653.
PF
XX
XX 10-JAN-1997; 97US-0035847P.
PR 29-OCT-1997; 97US-00960188.
PR
XX
XX (MAST) MASSACHUSETTS INST TECHNOLOGY.
PA
XX
XX Ingram VM, Blanchard BJ;
PI WPI; 1998-398795/34.
DR
XX
XX Inhibition of aggregation of, e.g. beta-amyloid peptide - by
PT administering decoy peptide or other calcium-influx inhibitor, useful
PT for, e.g. treating Alzheimer's disease.
XX
XX Example 8; Page 46; 68pp; English.
PS
XX
XX AAW64488-W64517 are decoy peptides that bind to a neurotoxic beta-amyloid
CC peptide (beta-AP) and reduces the ability of beta-AP's to form aggregates
CC that increase calcium influx into neuronal cells. Such peptides can be
CC used in the treatment of diseases associated with neurotoxic aggregates
CC of beta-AP specifically Alzheimer's disease. The peptides are
CC administered at 0.001-1000 (especially 0.2-20) mg/Kg, by injection and
CC orally, or from slow-release implants
XX
XX Sequence 42 AA;
SQ

Query Match 96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 6.1e-22;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFFAAGDVGSNKGAIIIGLMVGVVIA 42
DB 1 DAEFRHDSGYEVHHQKLVFFAAGDVGSNKGAIIIGLMVGVVIA 42

RESULT 9
AAW42989
ID AAW42989 standard; peptide; 42 AA.

AC AAW42989;
XX
DT 01-MAY-1998 (first entry)
XX
DE Full length beta-amyloid peptide (BAP).

XX Beta-amyloid peptide; BAP; extracellular BAP plaque;
KW cerebrovascular deposit; Alzheimer's disease; Down's syndrome;
KW amyloid precursor protein; APP; secretase; BAP aggregation;
XX abnormal proteolytic cleavage.

XX Homo sapiens.

XX US5703209-A.

XX 30-DEC-1997.

XX 05-JUN-1995; 95US-00464248.

XX 01-MAY-1992; 92US-00877675.

XX 20-SEP-1993; 93US-00123659.

XX (AMCY) AMERICAN CYANAMID CO.

XX Jacobson JS, Vittek MP;

XX WPI; 1998-076482/07.

XX Amyloid precursor protein fusion polypeptides - comprising APP fragment
PT and marker, useful for research and drug screening.

XX Disclosure; Col 7; 84p; English.

XX The present sequence represents a beta-amyloid peptide (BAP). Abnormal
CC accumulation of extracellular BAP in plaques and cerebrovascular deposits
CC is characteristic in brains of individuals suffering from Alzheimer's
CC disease and Down's syndrome. BAP is a poorly soluble, self-aggregating
CC protein which is derived from a larger amyloid precursor protein (APP).
CC APP is expressed as an integral membrane protein, and is cleaved by
CC secretase, between BAP 16lys and 17leu. Cleavage at this site precludes
CC amyloidogenesis and results in the release of the amino-terminal APP
CC fragment. Three major isoforms of APP exist: APP-695, APP-751 and APP-
CC 770. These isoforms are derived by alternative splicing. APP-APP 751 is a
CC deletion construct of APP-751, which has a deletion of 276 amino acids to
CC within 15 amino acids of the BAP domain. APP can be used as a substrate
CC for studying abnormal proteolytic cleavage which results in the release
CC of BAP, and also to screen for drugs that will inhibit such cleavage

XX Sequence 42 AA;

Query Match 96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 6.1e-22;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFFAAGDVGSNKGAIIIGLMVGVVIA 42
DB 1 DAEFRHDSGYEVHHQKLVFFAAGDVGSNKGAIIIGLMVGVVIA 42

RESULT 10

AAW47230
ID AAW47230 standard; peptide; 42 AA.

XX AAW47230;

XX 22-MAY-1998 (first entry)

XX Beta-amyloid peptide residues 1-42.

XX Screening assay; beta-amyloid peptide; treatment; amyloidosis disease;
KW Alzheimer's disease.

XX Homo sapiens.

XX US5721106-A.

XX 24-FEB-1998.

XX 12-SEP-1994; 94US-00304585.

XX 13-AUG-1991; 91US-00744767.

XX (MINU) UNIV MINNESOTA.

XX (HARD) HARVARD COLLEGE.

XX Mantyh PW, Maggio JE;

XX WPI; 1998-168404/15.

XX New in vitro screening assay for Alzheimer's disease drugs - comprises
PT assessing binding of labelled beta-amyloid peptide to silk sample.

XX Claim 8; Col 29-30; 36pp; English.

XX The present sequence was used in the development of a novel in vitro
CC screening assay for agents capable of affecting the deposition of beta-
CC amyloid peptide (BAP) on tissue. The method comprises contacting a silk
CC sample with labelled BAP, optionally in the presence of a test agent,
CC detecting the amount of label bound to the silk and assessing the effect
CC of the agent on the deposition of BAP. Agents that inhibit binding of BAP
CC to silk are potentially useful for treating amyloidosis diseases,
CC especially Alzheimer's disease

XX Sequence 42 AA;

Query Match 96.3%; Score 210; DB 2; Length 42;
Best Local Similarity 97.6%; Pred. No. 6.1e-22;
Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 DAEFRHDSGYEVHHQKLVFFAAGDVGSNKGAIIIGLMVGVVIA 42
DB 1 DAEFRHDSGYEVHHQKLVFFAAGDVGSNKGAIIIGLMVGVVIA 42

RESULT 11

AAV49691
ID AAV49691 standard; peptide; 42 AA.

XX AAV49691;

XX 13-JAN-2000 (first entry)

XX Human beta amyloid precursor protein peptide.

XX Human; beta amyloid precursor protein; APP; beta secretase inhibition;
KW alpha secretase; neurological disorder; Alzheimer's disease;

XX Down's syndrome; mutation.

XX Homo sapiens.

XX WO951752-A1.

PD 14-OCT-1999.
 XX
 PF 31-MAR-1999; 99WO-JP001701.
 XX
 PR 31-MAR-1998; 98JP-00101821.
 XX
 PA (CHUS) CHUGAI SEIYAKU KK.
 XX
 PI Ozawa K, Ikeda S, Tabira T;
 XX
 DR WPI; 1999-620208/53.
 XX
 PT A cell line which produces beta amyloid precursor protein, used in the
 PT investigation of neurological disorders such as Alzheimer's disease.
 XX
 PS Disclosure; Page 41; 70pp; Japanese.
 XX
 CC The present invention describes a cell line which produces beta amyloid
 CC precursor protein (APP) and expresses alpha secretase activity but
 CC expresses beta secretase activity only under an external stimulus. Also
 CC described is a cloning method for DNA encoding beta secretase.
 CC comprising: (1) inserting a DNA library into the cell line, expressing
 CC the inserted DNA, and selecting cells expressing beta secretase then
 CC isolating the beta secretase DNA from them; or (2) isolating nucleic acid
 CC from the cell line with or without external stimulation and performing
 CC subtractive cloning to identify DNA expressed only under stimulation.
 CC Products from the present invention may be used in the investigation of
 CC neurological disorders such as Alzheimer's disease and Downs syndrome and
 CC in particular the association of mutations of the beta APP with them. The
 CC present sequence represents a human beta APP peptide
 XX
 SQ Sequence 42 AA;
 XX
 Query Match 96.3%; Score 210; DB 2; Length 42;
 Best Local Similarity 97.6%; Pred. No. 6.1e-22;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVVIA 42
 Db 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVVIA 42
 XX
 RESULT 12
 AAM9585
 ID AAM9585 standard; peptide; 42 AA.
 XX
 AC AAM9585;
 XX
 DT 22-JUN-1999 (first entry)
 XX
 DE Mutant aggregating amyloid-beta peptide.
 XX
 KW Aggregation; amyloid-beta peptide; fluorescent group; detection;
 KM diagnosis; Alzheimer's disease.
 XX
 OS Homo sapiens.
 OS Synthetic.
 XX
 PN W09908695-A1.
 XX
 PD 25-FEB-1999.
 XX
 PF 13-AUG-1998; 98WO-US016809.
 XX
 PR 14-AUG-1997; 97US-0055660P.
 XX
 PA (REGC) UNIV CALIFORNIA.
 XX
 PI Glabe C, Garzon-Rodriguez W;
 XX
 DR WPI; 1999-190112/16.
 XX
 PT New fluorescent labeled amyloid A-beta peptides.

XX
 PS Example 1; Page 21; 50pp; English.
 XX
 CC This sequence corresponds to a mutant aggregating amyloid-beta peptide
 CC which can be covalently labeled with a fluorescent group. The detection
 CC or monitoring of an amyloid aggregate in a sample can be used to diagnose
 CC or detect a predisposition to Alzheimer's disease. The screening assays
 CC can be used to identify compounds for the treatment or amelioration of
 CC Alzheimer's disease or its symptoms. The fluorescent derivatives of the
 CC amyloid-beta peptide are also useful for exploring other aspects of
 CC amyloid structure
 XX
 SQ Sequence 42 AA;
 XX
 Query Match 96.3%; Score 210; DB 2; Length 42;
 Best Local Similarity 97.6%; Pred. No. 6.1e-22;
 Matches 41; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVVIA 42
 Db 1 DAEFRHDSGYEVHHQKLVFFAGDVGSNKGAIIGLMVGGVVIA 42
 XX
 RESULT 13
 AAM81474
 ID AAM81474 standard; peptide; 42 AA.
 XX
 AC AAM81474;
 XX
 DT 28-JAN-1999 (first entry)
 XX
 DE Synthetic amyloid beta (Abeta) peptide 9 (residues 1-42).
 XX
 KM Amyloid beta; Abeta; deoxygenated solvent, evaporative deposition;
 KM research; neurotoxicity; free-radical; glutamine synthetase.
 XX
 OS Synthetic.
 OS
 PN US5840838-A.
 XX
 PD 24-NOV-1998.
 XX
 PF 29-FEB-1996; 96US-00609090.
 XX
 PR 29-FEB-1996; 96US-00609090.
 XX
 PA (KENT) UNIV KENTUCKY RES FOUND.
 XX
 PI Aksenov M, Carney JM, Hensley K, Butterfield DA;
 XX
 DR WPI; 1999-034120/03.
 XX
 PT Process for treating synthetic amyloid beta peptides - by organic solvent
 PT treatment, useful for studying neurotoxicity.
 XX
 PS Claim 5; Col 11-12; 14pp; English.
 XX
 CC Sequences AAM81466 to AAM81476 represent synthetic amyloid beta (Abeta)
 CC peptides. The invention provides a process for treating a synthetic Abeta
 CC peptide that comprises dissolving the peptide in a deoxygenated solvent
 CC selected from trifluoroethanol, hexafluorocyclohexane, dimethyl
 CC sulfoxide, morpholinopropanesulphonic acid, dimethylformamide and
 CC acetonitrile to a concentration of 0.01-10 mg/ml, incubating the solution
 CC at 20-65 deg. C for 0.5-4 hour, and removing the solvent by "evaporative
 CC deposition" in 5-10 minutes. Synthetic amyloid beta peptides are useful
 CC as research tools for studying neurotoxicity resulting from Abeta peptide
 CC -enhanced free-radical production. The treatment increases the activity
 CC of the synthetic Abeta peptides in tests to determine free-radical
 CC generating capacity and glutamine synthetase inactivation
 XX
 SQ Sequence 42 AA;
 XX
 Query Match 96.3%; Score 210; DB 2; Length 42;

Db 1 DAEPFRHDSGYEVTHOKI.VEPAPDVGSNKGA.TTGI.MVGGVTA 42

Db 1 DAEFRHDSGYEVTHOKLVFAEDVGSNKGAIIGLMVGWVIA 422

Search completed: November 19, 2004, 15:51:17
Job time : 156 secs

This Page Blank (uspto)